

THE NATIONAL Provisioner

THE MAGAZINE OF THE
Meat Packing and Allied Industries

FEBRUARY 4, 1939

Volume 100

Number 5



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The National Provisioner

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(Mail and Wire)

"THE NATIONAL PROVISIONER DAILY MARKET SERVICE" reports daily market transactions and prices on provisions, lard, tallow and greases, sausage materials, hides, cottonseed oil, Chicago hog markets, etc.

For information on rates and service address The National Provisioner Daily Market Service, 407 S. Dearborn St., Chicago.

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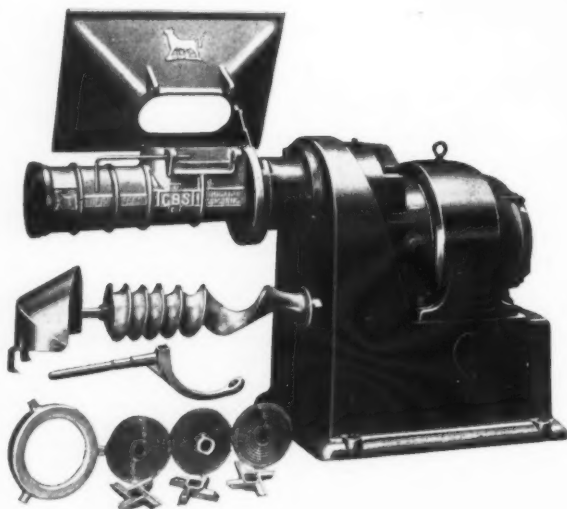


Illustration shows the assembly of parts of the No. 522 "BOSS" Grinder. Note manner in which hopper may be tilted for ready access to cylinder.

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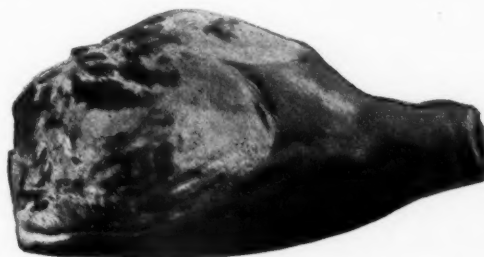
PRAGUE POWDER is a UNIFIED UNIT of dry invisible crystals, a firm physical union.

Hams must be cured by soaking up the curing solids, or by the pickle solids be pumped into the ham muscles by stitch needle, or into the arteries by the artery needle. The salt solids must enter by one of these three methods. *Choose your method.* PRAGUE POWDER PICKLE is *Pre-Prepared* for fast work. It is ripe in action. The cure is effected on pickle contact. Stitch pump, artery pump or soak it up in vats. PRAGUE cured hams have the "Rich Ripe Flavor." If you stitch pump use 2 oz. to the pound. If you artery pump use 8% to 10%. If you soak up the pickle use 30 to 40 days.

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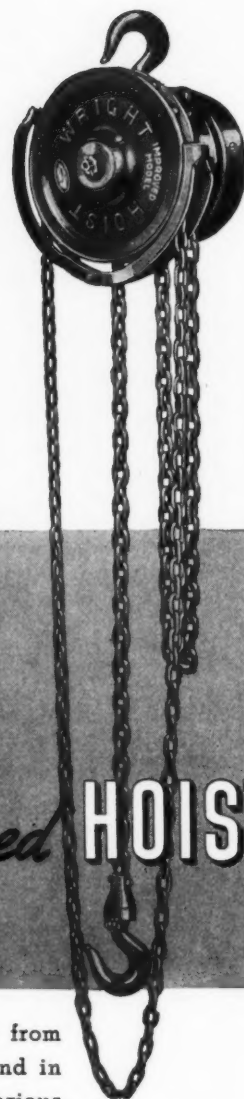
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Pre-Seasoning

WITH THE

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WILL LIFT YOUR PRODUCT
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CAPITALIZE ON YOUR HAM BUSINESS NOW!

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NATURAL CASINGS**

Armour and Company, Chicago

THE NATIONAL PROVISIONER

FEBRUARY 4, 1939

*The Magazine of the Meat
Packing and Allied Industries*

Treating Packinghouse Sewage

Low Operating Costs Mark Tovrea Packing Company's Waste Disposal Plant

HOW disposal of packinghouse sewage can be handled at low operating cost, and how sewage can be converted into marketable products, is ably demonstrated in the handling of this problem by the Tovrea Packing Co., Phoenix, Ariz.

Faced with the question of sewage disposal, the company in 1935 began a program of research and inquiry. At that time all waste material was being emptied into the Salt river, a stream about one mile south of the packing plant.

In addition to regular packinghouse wastes, the company's sewer was carrying sewage from other sources, including a cottonseed oil refinery, cottonseed oil mill and a whisky distillery. After thorough investigation the company completed plans for a sewage disposal plant which it put in operation in October of that year.

Average week-day flow of sewage handled by the disposal plant is approximately 300,000 gallons. Flow varies from practically nothing on Sundays to about 25,000 gallons per hour during week days. Major portion of this flow occurs between the hours of 8 in the morning and 6:30 in the evening. Sewage includes large quantities of paunch manure and solids

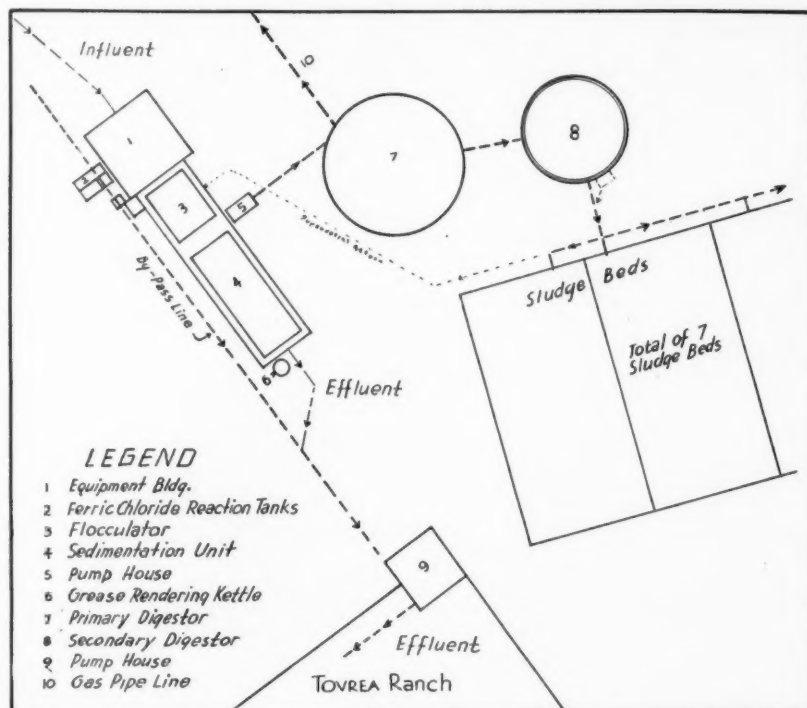
flowing through the disposal plant, at times reaching 12,000 parts per million.

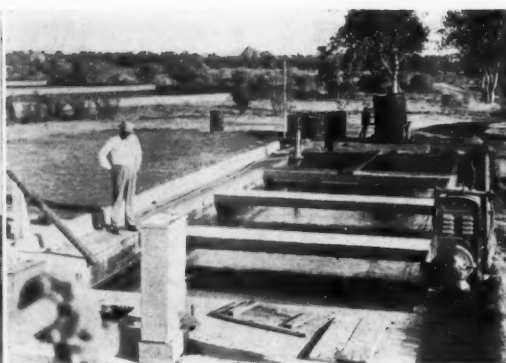
Treating Method

Upon entering the treating plant, the sewage passes through a bar screen with 1-in. openings and is mixed with a solution of ferric chloride. It then passes through a Dorcco flash mixer to a tank where it is flocculated in a Dorcco flocculator. Sewage remains in this tank approximately 30 minutes and then passes directly to a sedimentation tank. Sewage is held in this sedimentation tank for

TOVREA SEWAGE TREATING PLANT

Diagrammatic sketch showing equipment required and flow of solids and effluent.





a period of one and one-half hours.

Solids are settled into a hopper with a Link-Belt sludge collector and are pumped from this hopper into the primary digester. Effluent flows from the settling or sedimentation tank and is used to irrigate a part of a 160-acre Tovrea ranch south of plant.

Sludge is pumped from the hopper in the sedimentation tank to a primary digester. This is a reinforced concrete tank sealed with a steel cover and equipped with two Dorco turbo mixers and hot water heating coils. This tank is 55 ft. in diameter and 22 ft. high. The sludge remains in the primary digester for approximately 26 days, from where it flows to the secondary digester through an inverted syphon. The secondary digester is also a reinforced concrete tank, 40 ft. in diameter and 24 ft. high, equipped with a floating cover for gas storage.

Gas Recovery

Approximately 90 per cent of digestion takes place in the primary tank, the secondary serving mostly as a storage for gas and for stratification. Approximately 30,000 cu. ft. of gas is generated every 24 hours. This gas is purified, compressed, and piped to a nearby cottonseed oil mill. Any quantity in excess of that used by the oil mill is piped to the boiler rooms of the Tovrea plant, mixed with natural gas and burned under company boilers. B.t.u. value of this gas is equal to about 75 per cent in value per therm of that of the natural gas in this region.

Sludge remains in the secondary digester four days and when fully digested

PACKER'S SEWAGE EQUIPMENT

LEFT.—Ferric chloride reaction tank in sewage disposal system of Tovrea Packing Co. Used baling wire from cattle feeding lots supplies necessary iron, about 300 lbs. of which is used daily.

CENTER.—Sedimentation unit. Flocculator unit (not visible) is in foreground.

RIGHT.— Pump house for effluent. Through irrigation ditch in foreground runs water, rich in nitrogen, which is sold for \$1.50 per acre foot.

is drawn by gravity to drying beds adjacent to the digester. These beds consist of three concrete-walled, sand-and-gravel bottomed, under-drained beds and four plain dirt beds. The plant produces approximately five tons of sludge per week (dry basis 10 per cent moisture). Drying time on concrete beds varies during summer months from 20 to 30 days and in winter months from 30 to 50 days. Drying time is slightly longer on the dirt beds.

The ferric chloride used in the treating plant is produced with equipment of the Scott-Darey type. This consists of concrete reaction tanks, into which is placed used baling wire, procured from the company's cattle feeding yards, through which a solution of chlorine

and water is circulated to form ferric chloride solution.

The chlorine is fed by two Wallace and Tiernan visible vacuum chlorinators. Chlorine is purchased in car lots and handled in one-ton containers. Approximately 350 lbs. of chlorine, 300 lbs. of wire, and 800 gals. of water are used daily, producing a 3 per cent solution of ferric chloride which costs about 7½¢ per lb. of ferric iron. The plant is equipped to chlorinate effluent direct from chlorinators when necessary.

All Waste Treated

An investigation of various packing-house sewage disposal systems, made before this type of plant was selected by the Tovrea Packing Co., revealed that in many cases paunch manure and a large portion of the solids were either kept out of the sewage or removed before it entered the treatment plant.

In the Tovrea system all waste—including paunch manure—is successfully treated in the disposal plant. Not only has the system been efficient in treating sewage but it has proved very advantageous as a check on various plant operations. At times an excessive amount of fat and grease is collected at the disposal plant, and an investigation of this condition usually reveals defective grease traps or carelessness on the part of some employee in permitting fats to enter the sewer. About 100 to 200 lbs. of grease are recovered daily.

Market for Dry Sludge

Since installation of the disposal plant a market has been developed for

(Continued on page 22.)

CONVERTING WASTE TO MONEY

LEFT.—Digester tanks. In foreground is primary tank; secondary tank in rear.

CENTER.— Concrete drying beds, in which sludge is dried before being sold.

RIGHT.—Dried sludge, ready for sale at \$6.00 per ton. It finds a ready market.



NUTRITIVE PROPERTIES OF CANNED MEATS ANALYZED

Vitamin Contents of Cuts And Food Value Changes Due to Heat Processing

By L. E. CLIFCORN and G. V. HALL-
MAN—Continental Can Co.*

MEAT has been an important constituent in the diet of man since prehistoric times. Environment, necessity, personal choice and medical viewpoint have influenced diets to the extent that some have consisted entirely of meat, while others have contained none. In certain sections of the world, it is common custom to eat raw meat. In modern civilization, meat is usually cooked in some manner prior to serving.

In times of abundance, meat is preserved by drying, smoking, curing, refrigeration, canning or by combinations of these processes. It is of vital importance that those engaged in preservation of foods understand thoroughly the effect of these processes on various nutritional factors. Those involved in canning of meat products are deeply concerned with effect of canning processes on nutritional factors in meat.

In this discussion a comparison will be made between nutritional values of raw and canned meats. From this, a better understanding may be secured regarding nutritional value of raw meat and changes which may take place during sterilization of canned meats by heat. This sterilization completely cooks canned product so that it may be consumed cold, or warmed to desired serving temperature. On the other hand, similar raw meats require cooking. All changes in nutritional value taking place in canned meats during sterilization by heat also occur in home cooking of meats to a greater or lesser degree.

Protein in Meats

Meat is an excellent source of protein. Nutritive value of any protein is directly dependent upon number and amount of essential amino acids present. The superiority of animal proteins in the diet is clearly shown in tables compiled by Mitchell and Hamilton on the biological value of proteins from various sources. Karl Thomas, who conducted protein utilization experiments upon himself, concluded that animal proteins were much more important in adult nutrition than cereal proteins. Numerous workers have re-

ported the excellent supplementary value of meat proteins and their adequate nature for maintenance and growth.

Effect of heat and different methods of cooking on proteins of meat have been studied, although considerable work remains to be done. In most cases this work has been carried out with rats as the experimental animals. Jarussowa found that there were no differences in biological value of meat when fed raw, boiled for 20 to 25 minutes, or boiled in a special salt bath for 4 to 5 hours. Scheunert and his co-workers found no differences in nutritional value of pure

source of protein was properly modified, successful reproduction and lactation were observed through three generations. The increased nutritional demands of pregnancy and lactation must be satisfied by additional allotments, not only of protein but of all dietary essentials. Morgan and Kern, in studying the effect of heat upon the biological value of meat protein, supplemented their test ration at a 7 per cent protein level with dried and ground round of beef raw, and cooked in the following manners:

1.—Boiled in water at 84 degs. C. (internal temperature).

2.—Autoclaved at 15 lbs. pressure (250 degs. F.) for 7 minutes.

3.—Autoclaved at 15 lbs. pressure (250 degs. F.) for 1 hour.

The authors concluded that all three of the heat treatments decreased the nutritive value of the meat protein. An



HIGH IN NUTRITIONAL VALUE

Meats are good sources of protein, fats, minerals and energy, all of which are practically unchanged by heat processing during canning. Meats and meat products also contain vitamins A, C, D and E. The nutritional value of canned meats is similar to that of home cooked meats.

meat diets prepared from raw, boiled, or autoclaved meat; and similarly, no differences between raw, cooked and fried beef and mutton when incorporated in diets at a 10 per cent protein level.

It was reported that satisfactory reproduction could not be secured in rats reared on diets containing raw, cooked, and autoclaved meats at a 10 per cent protein level but that this was corrected when the level was raised to 20 per cent. Partial replacement of meat protein with casein showed no improvement in protein efficiency. Nelson and associates observed excellent growth and reproduction in rats consuming a ration which was well fortified with the necessary vitamins and minerals and in which lean beef muscle served as the main protein constituent. Lactation difficulties, however, were apparent.

Meat Nutritional Values

When a diet containing pressure cooked lean beef round as the chief

examination of the results shows the following:

TABLE 1.—EFFECT OF HEAT TREATMENT
ON NUTRITIVE VALUE.

	Absorbed Nitrogen Per Cent	Gain in Weight Per Gram Nitrogen Consumed Grams
Raw	67	2.58
Boiled at 84 degs. C. (int. temp.)	60	2.41
Autoclaved at 15 lbs. for 7 min.	62	2.44
Autoclaved at 15 lbs. for 1 hour	56	1.80

It is obvious that the only significant decrease is that in the case of the meat autoclaved at 15 lbs. pressure for one hour. There were no significant changes in digestibility of beef protein due to heat treatments. Robinson has pointed out that, on a comparative basis, the protein content of the average human diet is much higher than that of the rations used in experiments of Morgan and Kern, and further concludes that at such a level there is very little evidence that will support the belief that temperatures such as those commonly

*A paper read at the Meat Section meeting at the 32nd annual convention of the National Canners Association.

used in cooking meats will affect the protein value to any great extent.

Effect of Heat on Protein

Clifford has reported that if the rapid hydrolysis of meat protein with pepsin or trypsin, or trypsin alone, may be taken as a criterion, meat when raw is in the least digestible condition and that the most easily digested meat is that which has been roasted or grilled until it is just red inside.

Moulton has emphasized the fact that the precook employed in the canning of meat decreases moisture content and often results in an increase of about 30 per cent in protein content of canned product as compared to that of the original raw meat.

In general, it is safe to conclude that long, high temperature processing periods employed in sterilization of canned meats may have some effect on value of meat protein. From a practical point of view, changes, if any, are small and have no significance in the varied diet of the American public.

There is no evidence to show that canning processes change the food value of fats or carbohydrates in any way. One of the problems in the preservation of meat products is to prevent development of rancidity, which depends upon the presence of oxygen. Since, in good canning practice, air is excluded from the product, development of rancidity in canned meats has not presented a problem. Possibility of anti-oxidants, normally present in beef and pork fats, as protectors against development of rancidity in canned meats, has been suggested by Newton.

Meat for Energy

In general, meats are not considered as sources of carbohydrate. However, there are small amounts of carbohydrate in meat, mainly in the form of glycogen. The following carbohydrate values have been reported for beef: Muscle, 1.36 per cent; brain, 1.08 per cent; kidney, 0.4 per cent; tongue, 1.09 per cent; liver, 2.52 per cent.

A consideration of the energy value of meat is important. The relative position of meat as an energy food in the diet is shown in the following table:

TABLE 2.—ENERGY VALUE OF MEAT.

	Amount Necessary to Supply 100 Calories.
	Grams
Bacon, smoked	16
Ham fat	19
Sugar	25
Beef, corned	33
Ham, lean	37
Bread, white	38
Beef, round steak	64
Eggs	67
Beef (free from visible fat)	86
Milk	145

Cooking and canning operations have no effect on calorific value of meats other than that caused by an increase or decrease in moisture content of product, or by loss of soluble constituents.

Meat is a good source of phosphorus and iron. Meat and meat products are highly efficient in prevention of nutri-

tional anemia. Sherman, Elvehjem, and Hart found that iron in beef and pork, liver and cardiac muscle was 60 per cent available for regeneration of hemoglobin, while that in beef skeleton muscle was 50 per cent available and that in blood 25 per cent available. Liver is also an excellent source of copper, which serves as a biological catalyst in the mechanism of hemoglobin regeneration. Cooking and canning procedures have no effect upon minerals in meat.

Vitamins in Meat

Following the discovery of vitamins, scientific research has been directed toward the study of these substances which, although present in relatively small amounts in foods, today rank equally in importance with other constituents.

Vitamin A, the fat soluble vitamin, is necessary for growth, proper eye function, and resistance against infectious diseases. In nature it is found in two principal forms; i. e., vitamin A, from animal origin, and carotene, or provitamin A, mainly from plant origin. Small amounts of carotene are found in many products of animal origin. The adult requirement of vitamin A has been estimated to be in the neighborhood of from 3,000 to 6,000 International units or 2,000 to 4,000 Sherman units per day. Both vitamin A and carotene are stable at high temperatures in the absence of oxygen, but are rapidly destroyed by heat if oxygen or oxidizing agents are present.

In general, meat cannot be considered a good source of vitamin A. Investigators differ on the vitamin A content of beef and pork muscle, some reporting small amounts present and others reporting none. Beef fat and beef muscle have been reported to contain, respectively, 500 Sherman units and 15 Sherman units of vitamin A per 100 grams. Lard and pork have been reported to contain practically none. On the other hand, Sherman reports bacon to contain 15 Sherman units of vitamin A per 100 grams.

If bodily stores of vitamin A in the rat may be considered to be approximately parallel to that of other animal species, Sherman's work shows that kidney and lung contain 40 times, and liver 200 to 400 times as much vitamin A as present in skeleton muscle. This assumption may be supported by the fact that calf and hog liver have been found to contain, respectively, 7,300 and 8,000 Sherman units of vitamin A per 100 grams. Liver must be classed as a good source of vitamin A.

Effect of Cooking on Vitamins

No appreciable losses of vitamin A take place during cooking and processing of canned foods. Even less destruction may be expected due to partial or total exclusion of air. Lund, working with fish—which contain appreciable amounts of vitamin A—found no destruction of this vitamin due to smoking or canning operations.

Vitamin B₁, or thiamin, is a water soluble vitamin of value in correcting and preventing beriberi, regulating intestinal tone, regulating heart beat, stimulating appetite, and securing optimal growth in infants and children. More and more evidence is being obtained for the necessity of ample amounts of this vitamin in the diet. Many nutritionists have advocated the fortification of the public diet by the addition of pure synthetic vitamin B₁, or natural concentrates of this vitamin, to foods. Daily adult requirement is estimated to be approximately 300 to 600 International units.

Vitamin B₁ shows considerable resistance to heat in an acid or slightly acid medium, while it is easily destroyed in an alkaline medium, even at relatively low temperatures. Elvehjem, Hart and associates showed that vitamin B₁ in yeast and liver was completely destroyed by autoclaving, and that in liver it was inactivated by heating at 100 degs. C. for 24 hours. Preservation of this nutritional factor presents an important problem to food manufacturers.

It has been shown that meat is an excellent source of vitamin B₁. Table 1 shows vitamin B₁ contents of various meats and meat products. An examination of these results reveals that meat is a large contributor of this vitamin to the average human diet.

Losses During Canning

Christensen and associates, studying effect of cooking and canning on meat, showed that lean pork cooked at a temperature not exceeding 90 degs. C. lost 12 per cent of its vitamin B₁ potency. Lean beef cooked in the same manner lost 20 per cent. Heating pork in a steam autoclave or pressure cooker for 70 minutes at 10 lbs. pressure (240 degs. F.) destroyed 21 per cent of the vitamin B₁ in the case of the pork and almost all of the vitamin B₁ in the case of the beef.

Elvehjem and Arnold, studying canned dog foods, reported a temperature of 250 degs. F. for 110 minutes destroyed 80 per cent of the original vitamin B₁. Using the same process, similar losses were observed upon canning pork muscle. As temperature and time of processing were decreased, amount of destruction of vitamin B₁ was greatly diminished. It must be emphasized that for size of can used, dog foods are given a more drastic process than other meat products.

Japanese workers report that the daily requirement of vitamin B₁ for normal growth in the rat was supplied by an alcoholic extract of 20 grams of raw beef or 40 grams of canned beef, thus indicating a 50 per cent destruction. They also concluded that canned beef which had been stored for 4 to 5 years had not diminished in vitamin B₁ content. Lund and Kringstad, working with cod roe, reported a loss of only 20 per cent due to canning operations.

The chemical characteristics of meat

(Continued on page 46.)

MERCHANDISING MEAT

• News from the meat selling front

• Helps for meat manufacturers and dealers

SUCCESS IN RETAIL DRIVES ANALYZED

CITING the beef campaign of August, 1936, as an example of a successful organized retail drive, the U. S. Bureau of Agricultural Economics recently pointed out that such retail campaigns seem to be among the most effective of various efforts made to stimulate consumption of farm products.

In the Summer of 1936 retail food chains, independent retail food dealers, livestock marketing agencies, Institute of American Meat Packers, National Live Stock and Meat Board and other organizations cooperated in staging a national beef month campaign. "The evidence is fairly clear," says the bureau's report, "that this merchandising effort was productive of a good step-up in meat sales. Sales of beef by the participating chains were 59 per cent greater in August, 1936, than in 1937, and nearly double the sales in August, 1938."

Commenting on a successful grapefruit drive in the Winter of 1937, the bureau concludes that "one factor of success undoubtedly has been the tendency, during the drives, to reduce or hold down retail prices and margins; another is the character of the commodity itself, which lends itself to attractive advertising and display."

Price Appeal Helpful

A drive on eggs in the Fall of 1937 is reported to have been relatively less productive of results, "probably because eggs are 'pushed' more or less constantly by most retailers. The 1937 egg campaign was held at a time when prices were seasonally high. The low-price appeal made to the consumer by the beef and grapefruit campaigns was lacking."

A. C. Hoffman, who directed the bureau's study, concludes that of various efforts made to stimulate consumption of farm products, "organized retail campaigns seem to be among the most effective" because of the retailer's direct contact with the consumer. "Moreover, the largest and one of the least flexible elements in the spread between producer and consumer is the retail margin."

Too-frequent repetition of producer-consumer campaigns was advised against, because of the possibility of losing novelty and appeal to consumers.



THEY AND THEIR PARENTS ATE RED HEART

Extensive advertising promotion in 1939 will be put behind the three flavors of Red Heart dog food, manufactured and distributed by John Morrell & Co., Ottumwa, Ia. This will include the radio campaigns conducted during 1938 with extension of stations in 1939 and an aggressive campaign in national magazines, over 30 journals with countrywide distribution being used.

PRINTED SHIPPING CONTAINERS

Increasing use of colorful printed shipping containers is one of the interesting packaging trends. Until a comparatively few years ago only a few shippers were using individually printed cartons, of which the most common was

the plain corrugated shipping box on which only quantities and other necessary information were printed. Publicity value of such boxes was small.

The accompanying illustration shows printed containers typical of those now in general use and demonstrates how food processors are extending to their shipping containers advertising value and product identity formerly confined to consumer packages.

New processes and developments in the field of package designing make it possible to reproduce on the shipping box nearly any identifying label, theme or trade mark. A new type shipping-display container is also finding wide use. This unit serves as a conventional shipping carton in transit but when it reaches the retail outlet it is transformed quickly into a display stand.



PRODUCT IDENTIFIED

These shipping containers illustrate a type that is finding increasing use among food processors. They have been made possible by the development of new production methods and processes. (Photo Hinde & Dauch Paper Co.)

NEW MEAT PRODUCT PLANT

Frito Company of Dallas, Tex., distributor of pork skin chips, a specialty meat item, plans to erect a plant where its product will be manufactured under federal inspection. The firm's "Fritos" are on sale in four Southern states in small consumer packages. When the product was first made and sold in Dallas it was known as "Cracklins."

TIME TO CUT TAXES

Packer Leads Campaign To Educate Taxpayers

CONSCIOUSNESS of the man in the street of the high taxes he is compelled to pay, of the large part of his income which goes for taxes and of the ever-mounting burden due to increased federal, state and local spending will be developed if a program inaugurated by the Chicago Association of Commerce meets with the success hoped for by Oscar G. Mayer, association president and packer executive.

"Taxes are running at the rate of \$120,000 a minute, taking one-quarter of the wage earner's daily pay and 22 per cent of the income dollar," Mr. Mayer said in launching the Association's intensive campaign to mobilize public opinion. If the transition in American affairs necessary for the restoration of business to a soundly confident basis is to be made a reality it must come about within the next six months.

"Gallup polls have demonstrated that in recent months public sentiment has changed. The door is open to a return to reason in the restoration of that privilege which business and private investment formerly enjoyed in the creation and development of American initiative. But this change must not be allowed to lag.

Business Tells Its Story

"The success attained in changing popular sentiment during the last year has come through the willingness of business finally to tell its side of the story. Thousands of companies and hundreds of business organizations, including our own, working with the Chamber of Commerce of the United States, have driven home through every media of business the fact that 'what helps business helps you.'"

Mr. Mayer, who is president of Oscar Mayer & Co., Chicago and Madison, Wis., meat packers, and a past president of the Institute of American Meat Packers, points out that business is asked to educate the wage earner, the white collar worker, the consumer and the investor "to a realization that it's time to cut taxes."

Included in the visual means of education in the campaign are a 12 in. wide windshield sticker carrying the slogan "\$120,000 a minute—Whoa!"; a sticker for letters, "Time to Cut Taxes"; and a celluloid lapel button featuring the big slice of the day's income taken by taxes. Each piece of publicity carries an alarm clock emblem, which is seen in the accompanying illustration, showing the 9 to 5 o'clock working day and the big slice taxes take out.



TAXES TAKE A BIG SLICE

This alarm clock shows the 9 to 5 working day with the big slice taken by taxes. This emblem is featured on celluloid buttons, on windshield stickers and on stickers for letters in the drive by the Chicago Association of Commerce for tax reduction. This drive is headed by Oscar G. Mayer, president of the Chicago Association of Commerce and of Oscar Mayer & Co.

RECENT EMPLOYMENT GAINS

Total employment in industry rose from 44,175,000 employees in November to 44,306,000 in December, a gain of .3 per cent, according to latest estimates issued by the statistical division of the National Industrial Conference Board. Unemployment declined from 10,029,000 in November to 9,952,000 in December, a drop of nearly 1 per cent.

Featuring the December upturn in employment was the hiring of 409,000 men and women to work in trade, distribution and finance. Building construction absorbed 131,000 additional workers and other gains were made in the service industries and manufacturing. There were seasonal decreases in employment in agriculture and transportation.

MEAT DAY AT NEW YORK FAIR

Celebration of "Meat Day" at the New York World's Fair on August 9 has been announced by the convention committee of the New York Association of Retail Meat Dealers as a part of its program for the annual convention and exhibition of the National Association of Retail Meat Dealers, to be held at Hotel Commodore, New York, August 6-10. It was believed that such a designation was indicated as the forerunner of the movement to have a suitable day set aside in future years as "National Meat Day." Louis Wagner, jr., chairman of the committee on exhibits for the national convention said, "We believe this will prove a tremendous prestige and publicity factor in favor of meat as a food product as well as for the industry as a whole."

WAGE-HOUR LAW EFFECTS

While only about 300,000 workers benefitted from establishment of the first minimum of 25 cents per hour under the wage and hour act, about 550,000 may be affected by the increase in the minimum to 30 cents on October 24, 1939, according to an interim report made recently by Administrator Elmer F. Andrews to President Roosevelt and Congress.

The number working more than 44 hours per week, whose work week presumably has been shortened to that maximum since October 24, 1938, or who have been getting time and a half for overtime since that date, was placed at 1,384,000 by the administrator. Those working more than 42 hours, who will be similarly affected on October 24 of this year, at which time the new maximum goes into effect, were estimated to be 1,751,000.

In a breakdown by industries the Administrator's report showed 276,000 workers in "food and kindred products" now working more than the 42-hour maximum which becomes effective on October 24, 1939.

The report stated that "it is possible that in some instances the differences in labor cost involved in raising the rate prior to the act, to the 25-cent minimum, may be sufficient to stimulate mechanization of tasks suitable for machine operation but hitherto done by hand because of low wage rates. Long time effects may be expected to include some shifts from hand labor on simple tasks to better-paid machine tending jobs and some increased investment in machine installations."

JANUARY MEAT REVIEW

Prices of most grades of livestock advanced slightly during January, the Institute of American Meat Packers pointed out in its review of the livestock and meat situation for the past month. Marketings of all classes of livestock in January apparently were somewhat smaller than during January a year ago. However, with the exception of hogs, the number of livestock marketed was greater than the average number marketed during that month for the five-year period, 1929-1933.

Wholesale prices of most grades of meat, with the exception of lamb, increased somewhat during January. Prices of dressed lamb dropped somewhat during the month. Production of meats and lard in January is estimated to have been slightly smaller than that of a year ago. Production of pork continued to be smaller than the average during the five-year period, whereas production of other classes of meat was somewhat greater than the five-year average for the month.

There was a good demand for American pork and pork products in the United Kingdom during the month of January, the review said.

DIRECT BUYING UP

More Livestock of All Kinds Now Marketed Direct

TWENTY-TWO per cent of the cattle, 34 per cent of the calves, 49 per cent of the hogs and 33 per cent of the sheep and lambs slaughtered by packers in 1937 were obtained through direct purchase, says Knute Bjorka, agricultural economist of the U. S. Bureau of Agricultural Economics, in a study of "Direct Buying of Slaughter Livestock by Regions, 1923-1937."

Direct marketing has increased in recent years for all species of slaughter livestock, Mr. Bjorka explains. With hogs this increase began soon after the close of the World War, and with cattle, calves, sheep and lambs about a decade later. The most significant increase in the proportion of livestock bought direct by packers has been with those concerns located in the Northwestern Corn Belt. These packers also have expanded their slaughter operations relatively more than any other group of regional packers. Increase in slaughter in this area, however, has been primarily in plants of the so-called interior packers, and these concerns buy most of their livestock direct.

Regional Trends Analyzed

Packers in the Eastern Corn Belt, the Southwestern Corn Belt, and the South Central region also have increased their direct purchases of livestock, it is pointed out in the study. Packers in the Pacific Coast states buy a relatively larger proportion of their cattle, calves, hogs, sheep and lambs direct than do packers in any other area. Direct purchases also comprise a relatively large proportion of all purchases by packers in the South Atlantic, Intermountain and Northwestern Corn Belt areas.

Speaking of the direct purchases of the four largest packers, Mr. Bjorka said: "The four national packers as a group obtained a smaller proportion of their slaughter supply of cattle, calves, sheep and lambs through direct purchase during the period 1923-1937 than did all other packers as a group. During the period 1923-1928 these four concerns obtained a smaller proportion of their hogs through direct purchase than did the other packers but since 1929 the percentage of hogs bought direct by the four national packers has exceeded that of the other group. Both groups since 1923 have increased their direct buying operations for all livestock."

The report covers a study of direct marketing of cattle, calves, hogs, sheep and lambs in the United States; regional variations in direct buying of the various classes of livestock; the direct buying by the large packers compared

with buying by those operating on a more regional basis; a discussion of the factors contributing to the increase in direct marketing; and a report to the effect that hogs are marketed direct in relatively larger proportion than any other class of livestock. Extensive statistical data are included in the report.

1939 PACKAGE AWARDS

Sixty-four prize winners, selected in 20 classifications from 23,000 packages and displays in the 1938 All-American Package Competition, have been announced by Modern Packaging Magazine, sponsors of the competition. The packages will be on display at 122 East 42nd st., New York City, until March 15, 1939. The entries provide colorful testimony to the industry's activity during last year in all fields of merchandising and sales and are a far cry from the first All-American Competition, held in 1931, in which only 271 packages were entered.

The prize winning packages and displays cover a wide field of application, with the drug field predominating with 19 awards, followed closely by the food field with 14. The hardware field is represented with 7 prize winners, textiles 6 and beverages 5. Other outstanding packages represented among the prize winners include a 75-cent tube of fire extinguishing fluid, fish worm bait in tubes, 100 lbs. of resin in a multi-wall paper bag and common pins in a book instead of the traditional roll. Machinery installations, counter, shelf and floor displays complete the roll call of awards.

No meat packer's packages were among the prize winners this year. Packers who have packages on display include:

Armour and Company.—Bulk meat package with raised stitched seal; Luxor gift package.

Arnold Bros., Inc.—Arnold's All-American weiners; pure lard; sliced bacon; boiled ham; pork sausage.

Chappel Bros.—Ken-L-Ration dog food.

Cudahy Bros. Co.—Peacock brand sliced dried beef; Jack Sprat dried beef; family group of canned meats.

Dumarts Ltd.—Little Porkers sausage; English style sausage; Identified weiners display card; lard.

A. Fink & Sons, Inc.—Fink's Grade A sliced bacon.

Geo. A. Hormel & Co.—Spam brand. Jones Dairy Farm.—Jones dairy bottle display.

Kingan & Co.—Bliss No. 14 bulk meat package with raised stitch seal.

John Morrell & Co.—Morrell snack; Morrell Pride bacon; Morrell E-Z-Cut ham; Red Heart dog food.

Swift & Company.—Swift's bone meat; Vigoro.

Swift Canadian Co., Ltd.—Swift's Brookfield salad dressing.

ARMOUR PLANS FOR YEAR

Armour and Company will use the slogan, "meat is the mainstay of the meal," in its advertising program during 1939, president R. H. Cabell said in his report to stockholders at the annual meeting of the company held at the general offices in Chicago on January 27. "In newspapers and magazines, on billboards, with store advertising displays and in other appropriate ways we will call the attention of the housewife to the importance of meat in maintaining the health of the family and particularly the children, in an effort to win back for fresh meat the place it deserves in the food budget," he said.

In person or by proxy approximately 64 per cent of the 48,838 shareholders of the company were represented at the meeting. Reporting on the results of the previous year, Mr. Cabell said: "In view of the difficult conditions confronting us during the year, and which confronted industry in general, our results were better than might have been expected. We had a deficit of a million and a half dollars and about two-thirds of this represented a reserve for federal income tax on the earnings of subsidiary companies whose results could not be consolidated under the existing tax laws." Otherwise the loss would have been about a half million dollars.

"Declining markets during the forepart of the year forced heavy inventory losses," said Mr. Cabell.

"As soon as the downward trend ended we were able to get back on a profitable basis but our profits in the second half of the year were not quite sufficient to offset the earlier losses. We put into effect every economy possible without sacrificing the company's interest and we believe the savings we effected can be largely continued with benefit to our future results."

The company pays in cash each business day of the year \$1,250,000 for livestock, and the weekly labor pay roll amounts to \$1,500,000. Definite advantages have been brought about by assigning each major activity of the company to a single executive.

Five directors whose terms expired were re-elected. These were Laurance Armour, D. A. Crawford, James A. McDonough, Chase Ulman, and S. Mayner Wallace. Frederick H. Prince was re-elected chairman of the board at the organization meeting following the annual shareholders meeting. Robert H. Cabell was re-elected president and company officials were re-elected as follows: Edward L. Lalumier, vice president and secretary; Louis E. McCauley, vice president and treasurer; Warren W. Shoemaker, George A. Eastwood, William S. Clithero, Robert E. Pearsall, John B. Scott, F. W. Specht, H. S. Eldred, Henry W. Boyd, John E. Sanford, and Harley E. Andre, vice presidents; John A. Lane, comptroller and assistant secretary; John Schmit, general auditor and assistant comptroller; Chas. J. Faulkner, jr., general counsel, and Harry K. Crafts, assistant general counsel.

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PROCESSING POINTS *for the trade*

Blood Drying

How much steam is required to dry a ton of blood?

This is a question frequently asked THE NATIONAL PROVISIONER by packers. Steam consumption figures in blood drying have been collected for a number of years, but, like many other tests from meat packing plants, results vary so widely that it is difficult to determine which are typical and which are not. This is not due to any inaccuracies in figuring and collecting data by packers but solely to the varying conditions under which the tests are made.

Steam pressures used, temperature of blood at time steam is turned into dryer, condition of steam trap, percentage of moisture removed from the blood and mechanical condition of dryer are all factors which influence results.

Perhaps the two conditions principally responsible for high blood drying costs are faulty steam traps and dirty dryer heating surfaces—that is, charred material on the inner surfaces of the dryer. Steam traps should be inspected frequently to ascertain whether or not they are in good working condition. If they do not close promptly when the condensation has drained from the steam jacket they should be repaired or replaced. Obviously, the cleaner the heating surfaces are, the more rapid will be the heat transfer from the steam to the blood and the less steam used.

Steam Requirements

It should be possible with efficient, clean equipment to dry a pound of blood with a pound of steam. However, few packers seem to be able to get this result. Steam consumption required to dry a pound of blood has been reported to be as high as 3 lbs. in some instances. However, no test figures are of much value unless all conditions under which the tests were made are known.

In some plants all the operations of blood drying are performed in a jacketed melter. Under such conditions it is easy to determine the amount of steam required to perform the drying operation, figuring from either a liquid or a dried blood basis.

When a pound of water is evaporated in the boiler it makes a pound of steam. Conversely, when a pound of steam is condensed a pound of water results. To determine the amount of steam required to dry a batch of blood, therefore, it is only necessary to disconnect the discharge from the steam trap and weigh the condensate discharged. Weight of this water represents pounds of steam consumed during drying.

EYE APPEAL FOR BEEF

Appearance of beef on the selling rail is very important in making a good impression on the buyer. A Midwestern packer writes:

Editor THE NATIONAL PROVISIONER:

Can you give us some pointers on how to give our beef in the sales cooler the best possible appearance?

Ribbing should be carefully done after thorough chilling so that the "eye" of the rib presents the best appearance. In ribbing, the operator follows closely the top part of the lower rib on the plate without uncovering it, coming gradually down between the upper and lower rib to the point at the backbone where the vertebrae are thinnest, and bringing the knife across levelly. The backbone should be sawed through level with the eye of the beef.

Leaving one or more ribs on the hind-quarters serves to hold the flank distended and gives the hind a full or rounded appearance around the flank.

Forequarters should be hung evenly with the eyes of the ribs all on the same level. The fore shanks should be all at the same angle.

In hanging the hindquarter, the hook should be placed through the gam and never in the web. If hindquarters are hung in the gam it will insure even appearance.

When beef is placed in the sales

cooler it should be gone over with a knife and cloth, if necessary, and the eye of the rib smoothed up in order to give the fullest appearance.

Of course, some of the preliminary steps in handling the beef play a large part in giving it eye appeal. Proper clothing (as described in THE NATIONAL PROVISIONER of March 21, 1936) adds much to the appearance of the beef carcass. Clothing rounds out and plumps the carcass and smooths the fat covering.

Ample and well-directed light in the sales cooler is also of considerable value in bringing out the best qualities of the meat, and proper control of temperature and humidity keeps the beef in good condition.

BUTIFARRA CATALANA

A Southwestern packer wants to know how to make a sausage called Butifarra Catalana. He writes:

Editor THE NATIONAL PROVISIONER:

We would like to obtain some information on the making of Butifarra Catalana. Can you tell us how this Spanish sausage is made?

A small scale formula for this sausage calls for:

18 lbs. cooked pork head meat
2 lbs. cooked pork rinds

The head meat is run through the large and the rinds through the fine plate. The meats are mixed together with a pinch of oregano and:

½ oz. ground black pepper
10½ oz. salt

Stuff in narrow hog casings about ten to the pound. Cook in the same manner as liver sausage but do not smoke. Chill after cooking.

CAMBRIDGE SAUSAGE

A Midwestern sausage manufacturer asks what is meant by Cambridge sausage. He writes:

Editor THE NATIONAL PROVISIONER:

Is Cambridge sausage a domestic product or is it made abroad? We understand it is a kind of pork sausage.

Cambridge sausage is an English product which in some ways resembles American pork sausage. Lean pork is used, however, and is cut in the silent cutter. Some fat pork is added in cubes.

Cambridge sausage usually contains rusks and rice and the latter ingredient is sometimes colored pink. The meat is stuffed in medium hog casings and the sausage linked six to the pound.

SAUSAGE And Meat Specialties

→A volume of practical ideas on the layout and equipment of sausage plants of varying size; descriptions of materials used in sausage and meat specialty manufacture; formulas and operating directions; discussions of operating troubles and means of overcoming them, and an outline of major regulations prevailing in control of sausage manufacture.

→Place your order now for this Volume 3 of the *Packer's Encyclopedia*. The price postpaid is \$5.00.

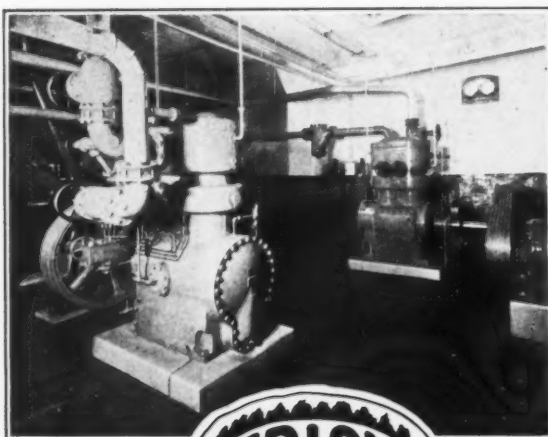
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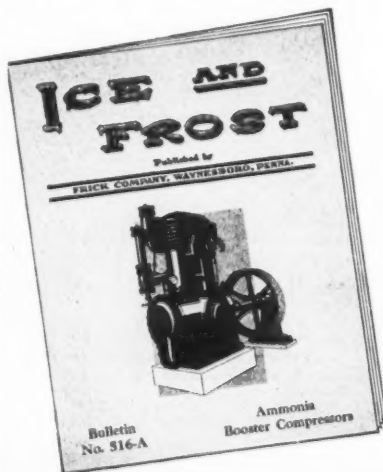
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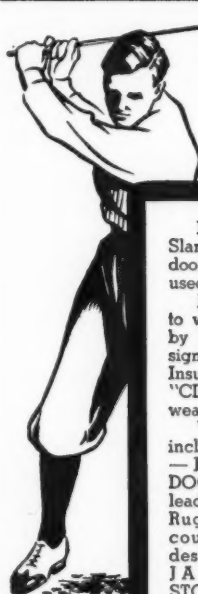
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REFRIGERATION *and Air Conditioning*

SMOKED MEATS

Ideal Temperatures and Humidities for the Hanging Room

WHAT temperature and humidity should be used in the air-conditioned smoked meat hanging room to maintain product in best condition with the least loss from shrink? This is a question which has been asked in several recent letters from packers and sausage manufacturers to THE NATIONAL PROVISIONER.

Air conditioning the smoked meat hanging room has been discussed in a previous issue of this publication. However, the subject seems to be of enough importance to repeat the information given at that time.

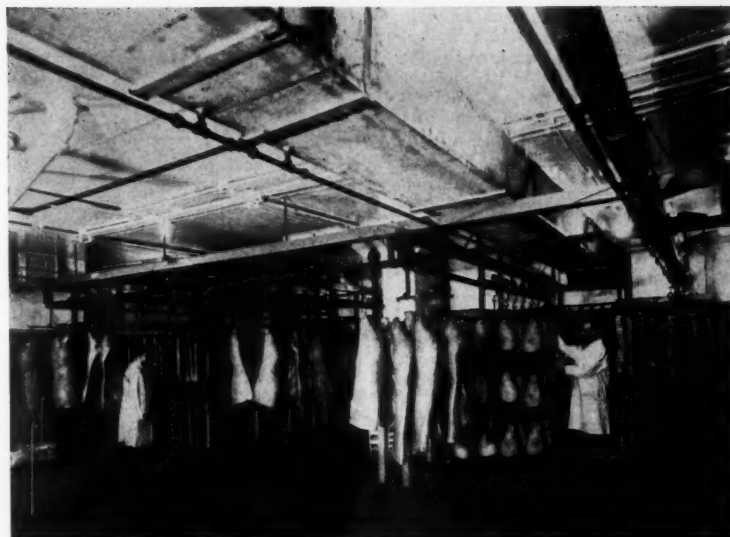
To a considerable extent conditions to be maintained in the smoked meat hanging room are comparable to those considered most suitable for the carcass chill room. In both instances it is necessary to extract the heat quickly from the hot products with the least possible loss of weight. If the meats are chilled with reasonable speed it is obvious that loss of weight due to fat drip is halted. Dehydration is reduced by maintaining a fairly high relative humidity in the room.

Unfortunately, however, conditions favoring the least fat drip are not those which hold dehydration to a minimum. And, conversely, conditions for preventing moisture loss increase fat drip.

Factors Affecting Shrink

Operating men, as a result, are not in complete agreement as to the proper percentage of relative humidity to be maintained in the smoked meat hanging room to keep meat weight losses at a minimum. A high relative humidity is required to keep moisture losses low. However, when relative humidity is above 75 per cent, moisture on the surface of the meat is not dried. Instead it runs off, carrying fat with it, and not only causing a weight loss but making floors unsightly and increasing cleaning costs.

In a humidity of 70 per cent or lower this surface moisture can be dried and the loss due to fat drip stopped. At this humidity, however, there is dehydra-



CHECKING SMOKED MEAT SHRINK

A relative humidity of from 70 to 75 per cent is most suitable for the smoked meat hanging room. Weight losses increase when the room is held much above or below this range. A temperature of 55 to 60 degs. F. is most generally used.

tion, which increases shrink and loss. Selecting the proper humidity in the smoked meat hanging room, therefore, is a matter to be decided on the basis of least weight loss, both of moisture and fat, although all packers do not agree on this point.

Packers' Test Results

A Chicago packer, for example, maintains his smoked meat hanging room in the neighborhood of 76 to 78 per cent relative humidity. His tests, he says, show that while he takes a larger fat loss under these conditions, this is more than compensated for by the greater reduction in moisture loss. The fact that there is more grease on the floor is of little consequence, he thinks.

Another packer's tests indicate the reverse of those obtained by the first packer. He maintains a relative humidity of 72 per cent in his smoked meat hanging room and says his weight loss is less than when a 4 to 5 per cent greater relative humidity is held.

An Indiana packer finds his smoked meat weight loss is least when a temperature of 55 degs. F. and a relative humidity of 75 per cent are maintained. Losses increase rapidly, he says, when relative humidity is above 75 per cent and below 71 or 72 per cent.

These experiences would seem to place the humidity danger zone below 70 per cent and above 75 per cent—not below 80 per cent and above 85 per cent, where they were earlier placed by some refrigerating and air conditioning engineers.

However, for the packer who is not averse to doing a little experimenting the humidity percentage best suited to his particular conditions may readily be determined, most air conditioning equipment having sufficient flexibility to give humidities within a 70 to 80 per cent range.

Choice of temperature for the smoked meat hanging room may be made within a reasonably wide range and quite often should be based on the operating methods found most satisfactory to the particular concern.

Quick chilling is desirable to stop fat drip. If too low a temperature is used, however, color of the smoked meats will fade. Probably few packers use a temperature lower than 55 degs. F.

Temperature Requirements Vary

A concern which does a local business and delivers its products in unrefrigerated trucks probably should not carry as low a temperature in the smoked meat hanging room as one which uses refrigerated trucks and ships in refrigerated cars. This is because in hot, humid weather, if the temperature of the product from the smoked meat hanging room is below the dew point temperature of the outside air, condensation will occur on the meats.

On the other hand, a packer who ships in refrigerated trucks and cars

ought to hold his product at a lower temperature for the reason that neither trucks nor cars were ever designed to serve as chill rooms, but solely for the purpose of maintaining the product at a safe keeping temperature during shipment.

Another factor which influences smoked meat hanging room temperature is insect pests, troublesome only in warm weather. Flies shun temperatures of 60 degs. F. or lower, so that to prevent possible contamination and the use of smoked meats as insect hatcheries, a temperature of 55 to 60 degs. F. should be used. Since smoking is in itself a preserving process it will be seen why maintenance of temperature at any definite point is not of vital importance.

Sewage Disposal Plant

(Continued from page 12.)

the dry sludge, which is sold regularly in Arizona and Southern California for use as a ground conditioner. The sludge contains between 2 and 3 per cent nitrogen and has many of the properties of peat moss. It absorbs many times its own weight in water and keeps soil in a loosened condition, aiding it to retain moisture for an exceptionally long time. The sludge is practically odorless and no weed seeds have been known to germinate in it. It is used to excellent advantage therefore,

on lawns, flowers and shrubs. At the present time this sludge is being sold for \$6.00 a ton at the plant, finding a ready market.

As stated previously, effluent from the disposal plant is used to irrigate feed crops on part of a 160-acre ranch. This water has a high nitrogen content, produces high yields and shortens growing time of crops on which it is used. Credit to the disposal plant for the effluent used for irrigation purposes amounts to approximately \$30.00 per month.

Original and Operating Costs

Original cost of the disposal plant was \$38,182.43, including \$19,326.99 for buildings, and \$18,855.44 for machinery and equipment. Operating cost of the plant for the first eleven months of 1938 is shown in Table 1. This indicates credits for sludge, tallow, irrigating water and gas, but does not take into consideration depreciation on buildings, machinery and equipment, or interest on investment.

Operation of the disposal plant and results obtained by treating the sewage have been checked at regular intervals by city, county and state health departments since the plant began operations. Results have been highly satisfactory to these departments at all times.

Table 2 shows analyses of the wastes and of the plant effluent on different dates. Table 1 and Table 2 are both reproduced below.

TABLE 1.—SEWAGE PLANT OPERATING COSTS
(First 11 months of 1938)

Sewage treated	84,600,000 gals.	
EXPENSES		
		Per 1,000 gals.
Chlorine	\$2,547.04	\$.03011
Labor	1,929.31	.02280
Power and light	565.82	.00669
Repairs	620.13	.00733
Supplies	145.01	.00171
	\$3,807.31	\$.06864
EXPENSE CREDITS		
Sludge and tallow	\$1,127.60	\$.01333
Gas recovered, est.	2,200.00	.02600
Water furnished ranch: 234.7 acre feet @ \$1.50	352.05	.00416
	\$3,679.65	\$.04349
NET OPERATING COST	\$2,127.66	\$.02515

TABLE 2.—ANALYSES OF WASTE AND EFFLUENT

Date	—Total Solids—		P.P.M. Suspended Solid		P.P.M. —B.O.D.—	
	Raw	Treated	Raw	Treated	Raw	Treated
March 10, 1937	8,213	5,780	5,780	271	....	....
March 11	5,380	3,880	3,880	208	....	....
Oct. 5	3,538	2,632	1,462	39	....	....
Oct. 6	4,834	2,352	1,762	130	....	....
Oct. 7	3,011	2,535	1,272	39	....	....
Oct. 8	7,362	2,639	2,612	142	....	....
Oct. 13	8,406	2,568	4,056	222	947	189
Oct. 14	7,314	2,817	3,460	101	1,040	184
Oct. 15	7,944	2,587	3,008	158	1,545	181
Oct. 16	8,662	2,295	3,154	442	1,400	300
Oct. 19	4,080	2,187	1,084	65	780	113
Oct. 20	7,842	2,236	3,114	120	2,100	192
Oct. 21	6,731	3,254	3,150	190	1,720	123
Oct. 22	6,460	2,942	2,924	73	1,420	171
Oct. 23	6,010	2,017	3,128	202	1,445	234
Oct. 26	6,461	3,046	3,178	205	1,650	177
Oct. 27	5,521	2,509	2,244	89	987	128
Oct. 28	10,081	2,934	4,422	108	1,690	207
Oct. 29	6,194	2,444	2,076	126	750	286
Oct. 30	7,953	2,270	3,638	382	2,210	281

PACKER AND FOOD STOCKS

Price ranges of listed stocks, February 1, 1939, or nearest previous date:

Sales Week ended	High.	Low.	—Close—	
			Feb. 1.	Jan. 25.
Feb. 1. —Feb. 1. —			1.	25.
Amal. Leather .. 1,500	2 1/4	2 1/4	2 1/4	2 1/4
Do. Pfd. ....	....	....	....	17 1/4
Amer. H. & L. ... 5,200	4 1/4	4 1/4	4 1/4	4 1/4
Do. Pfd. ....	....	....	....	32 1/2
Amer. Stores ... 3,800	11 1/2	11 1/2	11 1/2	10 3/4
Armour III. ... 13,400	5 1/4	5 1/4	5 1/4	5 1/4
Do. Pr. Pfd. ... 340	44	44	44	44 1/2
Do. Pfd. ....	....	....	....	62
Do. Del. Pfd. ... 300	101	101	101	101 1/4
Beechnut Pack. ...	....	....	....	121
Bohach, H. C. ...	....	....	....	2 1/4
Do. Pfd.	10	21 1/4	21 1/4	22 1/2
Chick. Co. Oil. ... 400	12 1/2	12 1/2	12 1/2	12 1/2
Childs Co. 3,300	10 1/2	10 1/2	10 1/2	10 1/2
Cudaby Pack. ... 1,200	14 1/4	14 1/4	14 1/4	13 3/4
Do. Pfd.	130	60 1/4	60 1/4	59
First Nat. Strs. 2,700	45 1/4	45 1/4	45 1/4	43 1/4
Gen. Foods ... 6,100	38 1/2	38 1/2	38 1/2	37 1/4
Do. Pfd.	500	117	117	116 3/4
Glidden Co. 3,700	21	20 1/4	20 1/4	19 1/2
Do. Pfd.	290	45	45	45
Gobel Co. 2,800	2 1/4	2 1/4	2 1/4	2 1/4
Gr. A&P 1st Pfd. 50	127	127	127	126
Do. New ... 1,675	85 1/2	85 1/2	85 1/2	81 1/2
Hormel, G. A. ...	....	....	....	24 1/4
Hygrade Food ... 400	2	2	2	2
Kroger G. & B. 15,900	23 1/2	23 1/2	23 1/2	23 1/2
Libby McNeill. 1,150	5 1/4	5 1/4	5 1/4	5 1/4
Mickleberry Co. 450	4	3 1/4	4	3 1/4
M. & H. Pfd. ...	....	....	....	35
Morrell & Co. ... 300	36	36	36	35
Nat. Tea ... 1,200	3 1/4	3 1/4	3 1/4	3 1/4
Proc. & Gamb. 3,600	56 1/2	56 1/2	56 1/2	54 1/2
Do. Pfd. 11,050	116 1/4	116 1/4	116 1/4	117 1/4
Rath Pack. ....	....	....	....	34
Safeway Strs. ... 27,000	37 1/4	37 1/4	37 1/4	37 1/4
Do. 5% Pfd. ... 130	93 1/4	93 1/4	93 1/4	91
Do. 6% Pfd. ... 210	106	106	106	103 1/2
Do. 7% Pfd. ... 220	108 1/4	108 1/4	108 1/4	108 1/4
Schl Meyer ... 100	2 1/2	2 1/2	2 1/2	2 1/2
Swift & Co. 3,800	19	19	19	18 1/2
Do. Intl. 950	27 1/2	27 1/2	27 1/2	27
Trans. Pork ...	....	....	....	8
U. S. Leather. 2,600	5	5	5	4 1/2
Do. Pfd. 3,400	9 1/4	9 1/4	9 1/4	9
Do. Pr. Pfd. ...	....	....	....	61 1/4
United Stk. Yds. 1,400	3 1/4	3 1/4	3 1/4	3 1/4
Do. Pfd. 800	7 1/2	7 1/2	7 1/2	7 1/2
Wesson Oil ... 2,600	26 1/2	26	26	25 1/2
Do. Pfd. 290	71 1/4	71 1/4	71 1/4	74
Wilson & Co. ... 3,800	4 1/2	4 1/2	4 1/2	4 1/2
Do. Pfd. 1,000	47	47	47	42

FINANCIAL NOTES

Directors of Compania Swift International have declared a quarterly dividend of 50 cents on the common stock, payable March 1. Books close Feb. 15.

Board of directors of Swift & Company has declared a quarterly dividend of 30 cents (1 1/5 per cent) on the company's common stock, payable April 1 to shareholders of record on March 1.

Dividend of \$3.00 has been announced on common stock of Great Atlantic & Pacific Tea Co., together with a quarterly dividend of \$1.75 on the company's preferred stock. Both dividends will be paid Feb. 16, books closing Feb. 3.

CHAIN STORE SALES

Sales of Safeway Stores, Inc., for the four weeks ended January 21 reached \$25,714,735, as compared to last year's corresponding figure of \$26,731,524. For the four weeks ended December 24, 1938, sales of the company showed an increase of 3.3 per cent over the corresponding 1937 period.

Union Premier Food Stores, Inc., report sales of \$1,557,969 for the four-week period ended January 28, marking an increase of 24.1 per cent over the \$1,255,741 total for the same period last year. Company sales for the four weeks ended December 31, 1938, were 36.3 per cent above those of the like 1937 period.

BUYER'S GUIDE

to new machinery, equipment and supplies

PACKAGED AIR CONDITIONING

A complete line of "packaged" self-contained air conditioning units for commercial establishments, ranging in capacity from 1 to 15 tons and in combinations up to 30 tons, has been announced by the Westinghouse Electric & Manufacturing Co. Three of the units are central system type and four are the type for installation within conditioned space. Factory engineered and built, these new units are a complete air conditioning system packaged in a compact, enclosed cabinet—delivering results expected from individually-engineered air conditioning.

Eliminating the hazards of refrigera-



FOR SMALL BUSINESSES

Especially adaptable for industrial and public building installations, this unit is representative of the recently-announced, self-contained packaged air conditioning line of the Westinghouse Electric & Manufacturing Co. Ease of installation and efficiency of operation are two of the outstanding features of the line. Cabinets are of all-steel, welded construction.

tion-cycle installation, all that is necessary for operation are power, water and drain connections. Requiring a minimum of floor space, every unit can be carried through a 3-ft. door opening—the largest occupies only 2 ft. 10 in. and is 6 ft. 6 in. deep and 5 ft. 4 in. high. Lightness of weight is an outstanding feature of these models, attained through compactness and elimination of installation material. Five models have been added to complement and complete the Westinghouse line of self-contained units. The ratings of the complete line include 2½-, 3¼-, 6-, 7½-, 10- and 15-ton jobs. These units may be combined to provide multiples of the given ratings, providing a wide range of capacities available for commercial installations up to 30 tons.

New units employ the Westinghouse hermetically sealed compressors. Two switches permit maximum flexibility of operation—one controls the entire cooling mechanism and the other the blower motor so that air circulation may be enjoyed when cooling is not necessary. All-steel welded form of cabinet insures permanent rigidity and presents a pleasing appearance.

Units of new line are easily adapted to Winter air conditioning by the simple installation in the cabinets of the necessary accessories, such as heating coil and humidifier, thereby providing year around air conditioning with all its added advantages.

TRANSPARENT PACKAGING

Celluloid Corporation held its annual sales meeting at the Downtown club in Newark, N. J., on January 27, at which the film, "Modern Plastics Preferred," featuring the company's winners in the modern plastics competition, was shown, together with the motion picture, "Word Magic." Reports made by heads of the Lumarith Protectoid transparent packaging material and other divisions of the company forecast a successful 1939. President W. S. Landes presided at the meeting in the absence of general sales manager George H. Boehmer.

FOOD RESEARCH EXPERT

Dr. B. F. Buchanan, formerly instructor in the Department of Chemistry, Iowa State College, Ames, Ia., recently joined the staff of the technical service division of the American Maize Products Co., 100 East 42nd st., New York City. Dr. Buchanan will be actively engaged in food research.

JOHNS-MANVILLE CHANGES

William H. Fogarty, 27 of whose 30 years with Johns-Manville have been spent in the company's Chicago office, has been transferred from the Chicago district managership of the power products department to assistant to the vice president of the J-M Sales Corporation. In his new position, Mr. Fogarty



W. H. FOGARTY



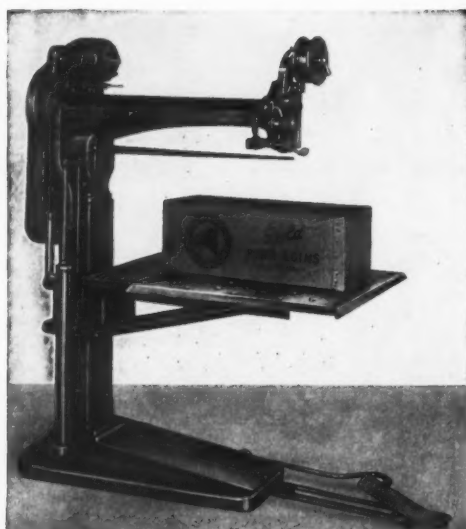
C. H. HALL

will continue to make his headquarters in Chicago. He will be succeeded as district manager by Corydon H. Hall, who for the past three years has been assistant sales manager in the New York power products district for J-M.

Mr. Fogarty started with Johns-Manville 30 years ago as auditor of the then H. W. Johns-Manville Co. in New York. Two years later he came to Chicago as credit manager, and in 1918 became sales manager of the Chicago district. In 1933, with the formation of power products and building materials departments in Johns-Manville, Mr. Fogarty was made sales manager of the power products department and E. F. Boyle building materials sales manager.

Mr. Hall, who assumed his new duties as district manager in January, is a son of the late Charles C. Hall of Alexandria, Ind., inventor of rock wool and generally credited with launching the home insulation industry in America. After graduating from Purdue University in 1929, Mr. Hall joined his father's Banner Rock Products Co., in Alexandria, where he had become general manager in 1929 when this company was purchased by Johns-Manville. He then became a staff manager in the insulation department of J-M at New York headquarters and was made assistant sales manager for the New York district in 1936.

Ask THE NATIONAL PROVISIONER for "Air Conditioning," an information service for the meat processor.



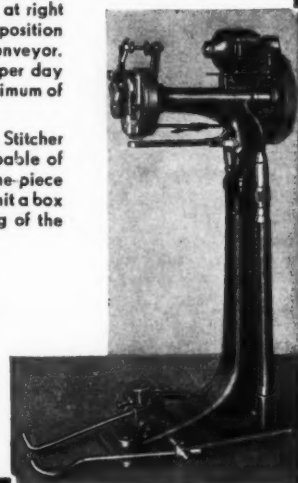
BLISS POWER LIFT TOP STITCHER

for assembling and sealing **BLISS BOXES** and Regular Slotted Containers

The New BLISS Power Lift Top Stitcher is equipped with power-driven work-table operated by a balanced foot pedal in front of machine. Table is raised or lowered at a speed of 12 inches per second. Table automatically stops at right position for stitching of Box. At low position table can be adjusted to height of your conveyor. Operator can stitch many more cases per day than by the old method, and with a minimum of physical effort.

The Bliss Combination Box and Bottom Stitcher meets the demand for a single unit capable of assembling Bliss No. 4 Boxes and one-piece Slotted Containers. It combines in one unit a box and bottom stitcher, the box arm being of the folding type and the post removable.

BOX AND
BOTTOM STITCHER



Full information regarding these two machines will be gladly furnished

DEXTER FOLDER COMPANY

330 West 42nd Street, New York, N. Y.

Bliss, Latham and Boston Wire Stitching Machinery for All Types of Fibre Containers

CHICAGO 117 W. Harrison St.	PHILADELPHIA 5th and Chestnut Sts.	BOSTON 185 Summer St.	CINCINNATI Roy C. Kern—3441 St. Johns Place
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GENUINE VEGETABLE
PARCHMENT~

1896

Any product that has withstood forty-two years of the trend of change must be good—This is our 43rd year producing Genuine Vegetable Parchment—for wrapping meats, butter, oleomargarine and all moist food products.

1939

**A WRAPPER THAT IS
GREASE-PROOF
INSOLUBLE
ODORLESS**

West • Carrollton • Parchment • Co.
WEST. CARROLLTON ~ ~ OHIO

Provisions and Lard

WEEKLY MARKET REVIEW

Pork and Lard Markets

VOLUME of trade was rather small in lard futures market at Chicago this week and new lows were established under commission house and some packer selling; the market closed Thursday at 12½ to 17½ points under the preceding Friday.

Lard was about steady in light trading last weekend as hog trend was a strengthening factor; Monday's market was curtailed due to blizzard and trade was slow at steady prices. Commission house and packer selling, induced by action of cotton oil and grains as well as draggy hog market, pushed lard lower on Tuesday. Selling continued Wednesday and prices declined; demand was light and trade buying was limited. An increase of 21,471,000 lbs. in stocks at seven markets during January brought selling and new low prices Thursday; packing interests gave some support but investment buying was small.

Cash trade was rather quiet this week. On Thursday, cash lard was quoted at 6.67½ nominal and loose at 6.10 bid; refined in tierces was 8.12½c.

Demand was fair and the market was steady to a little lower at New York. Prime western was quoted at 7.25@7.35c; middle western, 7.25@7.35c; New York City in tierces, 6½c, tubs, 7c; refined continent, 7¼@7½c; South America, 7½@7¾c; Brazil kegs, 7½@7¾c, and shortening in carlots, 9c, smaller lots, 9¼c.

Hogs

Hog marketings at Chicago were somewhat smaller this week, partly on account of the storm, and prices advanced 5@15c. The week's high top was on Monday (blizzard day) but \$8.15 was paid on Tuesday and Thursday against \$8.00 on preceding Friday. The 140-@160-lb. and up to 180-@200-lb. butchers gained 5@15c on the week, but the rise was restricted to 5c on heavier weights. Average weight was running around 245 lbs. or a little heavier.

EXPORTS

Lard exports are apparently holding up fairly well with shipments through New York for four days ended February 1 totaling 1,837,000 lbs. North American exports of bacon and hams for week ended January 28 were 3,734,000 lbs. and lard shipments were 4,714,000 lbs. At Liverpool on Thursday spot lard was quoted at 39s 6d; A. C. hams, 91s, and Canadian A. C. hams, 100s.

CARLOT TRADING

Demand for green meats was somewhat limited in the carlot market at Chicago during the past week but prices showed little change. Green regular hams were quiet with the 10/16 avail-

able at the market and some asking higher; list was about steady with last Friday. S. P. regulars were quiet with last sales at the market; there was fair distributive trade in S. P. boilers. There was fair interest in light green skinned hams with some trade in 12/14 and 14/16; the 25/30 were off ¼c on the week. S. P. skinned hams have been quiet with light and medium offered at unchanged list prices. There was fair interest in all averages, green picnics with 4/6 available at market and 6/8 moving at steady price; offerings of 8 lb. and up picnics were limited and 10/12 and 12/14 were marked up ¼c on the week. S. P. picnics were available at the market and 6/8 sold Thursday at 11¼c, Chicago.

There was slight interest in frozen green bellies this week; some sellers felt bellies were low enough at list and rejected lower bids, but 8/10 and heavier

(Continued on page 27.)

MEAT STOCKS INCREASE

Stocks of meat on hand at the seven large packing centers on February 1, 1939, were 4,500,000 lbs. less than the stocks at the same time a year ago but show an increase of over 32,000,000 lbs. for the month. The latter is a seasonal increase, as stocks normally rise during this Winter packing season, the only exception in recent years being in 1935, when stocks declined. The increase at these points is considerably less than it was in January, 1938, when meat stocks increased nearly 50,000,000 lbs.

Lard stocks, on the other hand, are more than 35,000,000 lbs. above a year ago and showed an increase of over 21,000,000 lbs. for the month. Ham stocks are below a year ago and increased only slightly during January. Both dry salt and pickled bellies showed an increase for the month and dry salt bellies are

(Continued on page 27.)

PORK AND LARD EXPORTS MOUNTING

PORK imported into the United States during 1938 totaled 52,382,728 lbs. This was 22,500,000 lbs. less than came in during the calendar year 1937. Imports during December were 360,000 lbs. less than in December, 1937. Pork exports during 1938 were 32,400,000 lbs. greater than the 1937 exports. Lard exports were 70,000,000 lbs. greater in 1938 than in 1937.


Less beef was imported during 1938

than in 1937. Of the nearly 82,000,000 lbs. imported during 1938, almost 78,600,000 lbs. was canned beef. Nearly 2,000,000 lbs. more beef was exported in 1938 than was shipped from the United States during the previous year.

Imports and exports of meat and exports of lard and sausage materials during December compared with December, 1937, and the 12 months of 1938 and 1937 were as follows:

IMPORTS AND EXPORTS OF MEAT AND LARD.

	Dec., 1938. lbs.	Dec., 1937. lbs.	12 mos., 1938. lbs.	12 mos., 1937. lbs.
Imports.				
Pork—				
Pork, fresh	250,649	1,108,100	4,287,255	20,876,569
Hams, shoulders and haws	4,332,454	3,282,284	44,347,204	47,422,022
Pork, pickled, salted and other	298,617	851,129	3,748,209	6,531,913
Total pork	4,881,720	5,241,513	52,382,728	74,830,504
Beef and Veal—				
Beef, fresh	170,088	417,965	1,634,128	4,665,558
Veal, fresh	4,026	28,025	102,392	208,801
Beef and veal, pickled or cured	99,335	88,563	1,559,566	1,753,016
Beef, canned	6,818,805	3,355,407	78,597,007	88,097,133
Total beef and veal	7,092,254	3,889,960	81,893,093	94,724,508
Exports.				
Pork—				
Fresh and frozen	1,435,419	941,701	9,254,573	4,237,537
Cumberland and Wiltshire sides	425,624	3,032	1,680,950	45,385
Hams and shoulders	3,409,890	4,081,149	52,215,649	39,859,942
Bacon	842,780	584,835	9,662,386	2,963,127
Pickled	1,042,429	1,072,552	14,082,195	9,900,390
Canned	902,902	573,228	8,737,041	7,127,083
Total pork	8,059,125	7,256,497	95,632,794	63,232,464
Lard—				
Lard	19,198,388	22,295,451	204,603,392	136,778,048
Sausage—				
Sausage	240,806	230,649	2,559,104	2,706,822
Sausage ingredients	120,046	16,695	1,790,903	1,218,616
Beef and Veal—				
Beef and veal, fresh	680,619	367,525	4,737,841	4,494,400
Beef, cured	909,967	396,578	7,199,139	5,463,330
Beef, canned	204,566	227,271	2,051,308	2,708,556
Total beef and veal	1,795,152	991,374	13,988,288	12,666,286



You Trade **PENNIES** **FOR DOLLARS**

When you use high grade dry milk solids* in your sausage and loaves, because

- you improve the flavor
- you add to the appearance
- you increase the food value

and when you step up the quality of your product, you “up” your sales many dollars.

*Dry milk solids is the product resulting from the removal of fat and water from milk. It contains not over 1½% butterfat and not over 5% moisture.

It is the consumer who actually determines which way your sales are going—up or down. Make certain of consumer preference for your products by using dry milk solids and insist on it being high grade, made by reputable manufacturers and packed in approved barrels or drums to protect its goodness.

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Luxury
Loaf
Liver
Loaf
Chicken
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Souse
Loaf

Increase LOAF SALES

Pullman loaves or small hams produced in sizes 02L-E, 1-0-E, 02S-E, or 02G-E, may be inserted into 4½-inch High Stretch Casings by using our new Stuffer No. 2. Ask for particulars.

Stuffer
Made of Stainless Steel with Cast Aluminum Base

Manufactured in two sizes.
No. 1 for 3¾" casing
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ADELMANN STUFFER shown enables placing of a Visking, or other type cellulose casing, around a loaf after cooking. Better keeping qualities, improved appearance, and permanent identification assured. Casing adheres to surface of loaf preventing mold or slime between wrapper and contents.

Hog Cut-Out Results

OWING to shortage of hogs at Chicago, due to unusual weather conditions, there was considerable day to day fluctuation in price with hogs on Monday going to a top of \$8.25, the highest price since last October. With the arrival of larger numbers prices declined considerably but showed strength again on the closing day of the period. Small supplies had the further effect of increasing operating costs.

Average price of good hogs was well above that of a week earlier and while values, too, showed some strength for the period this did not equal the increase in hog cost and higher operating charges. As a result, cutting losses showed considerable increase and on the heaviest average the loss was nearly \$2 per head. It would seem that product from hogs showing much loss would need to be turned over quickly and not accumulate added costs in the form of carrying charges.

Good and choice hogs weighing from 160 to 220 lbs. were in strongest demand and brought best prices on all sessions during the current period. On the last two days of the period when the top dropped to \$8.00, good 230 to 260 lb. butchers brought \$7.40 to \$7.80 with heavy kinds weighing up to 350 lbs. at \$7.20 to \$7.50. Quality of heavy butchers was very good but some of the lighter weights lacked finish, and suffered price penalty accordingly. Good light butcher sows brought as high as

\$7.00 to \$7.15 with heavier kinds as \$6.50 to \$6.85.

The test shown on this page is furnished merely as a guide in working out hog values.

Pork and Lard Markets

(Continued from page 25.)

were marked down $\frac{1}{4}$ c. Dry cured bellies were quiet except for jobbing sales at list; the 8/10 and 10/12 were $\frac{1}{4}$ c lower. Only moderate interest was shown in D. S. bellies and offerings were available late this week at $\frac{1}{4}$ c lower list, local and outside points. Cash clear bellies closed in the pit on Thursday at 9.75 nominal. D. S. fat backs were quiet and offerings of practically all averages were available at market; the 8/10 were off $\frac{1}{4}$ c on the week.

BARRELED PORK

Barreled pork list was marked down at Chicago this week on lack of trade and easiness in D. S. backs and other meats. The 30/40 clear fat back pork was quoted Thursday at \$19.50; 40/50, \$16.00; 50/60, \$14.00; 60/70, \$13.25; 70/80, \$13.00; 80/100, \$12.75; 100/125, \$12.50; 25/35 clear plate pork, \$14.00; 35/45, \$13.00; bean pork, \$17.00, and brisket pork, \$21.00.

FRESH PORK

Fresh pork market opened the week at higher prices, partly due to storm, and managed to hold most of the advance although demand was only normal and trade turned spotty at midweek.

The market had a little better tone on Thursday with improved demand for loins, Bostons and offal. The 8/10 loins on Thursday were at $16\frac{1}{4}$ c, up $1\frac{1}{2}$ c on the week, while Bostons were 1c and skinned shoulders $\frac{1}{4}$ c higher.

SAUSAGE MATERIALS

There was considerably more interest in fresh regular trimmings at Chicago this week with the supply limited; regulars went up to 8c but sold at $7\frac{1}{4}$ c on Thursday. Special leans were $14\frac{1}{4}$ c and 95 per cent leans sold at $16\frac{1}{2}$ c.

(See page 35 for later markets.)

MEAT AND LARD STOCKS UP

(Continued from page 25.)

only slightly below the stocks on hand last February 1.

Stocks at Chicago, Kansas City, Omaha, St. Louis, East St. Louis, St. Joseph and Milwaukee, on January 31, 1939, with comparisons as especially compiled by THE NATIONAL PROVISIONER.

	Jan. 31, 1939, lbs.	Dec. 31, 1938, lbs.	Jan. 31, 1938, lbs.
Total S.P. meats	129,139,370	107,085,870	129,523,510
Total D.S. meats	24,915,000	17,256,042	27,674,037
Other cut meats	18,587,964	15,542,518	19,855,827
Total all meats	172,642,334	139,884,430	177,053,374
P.S. lard	80,942,627	61,098,984	45,217,290
Other lard	12,621,627	10,994,662	11,806,024
Total lard	93,564,254	72,093,646	57,023,313
S.P. regular hams	17,483,467	15,509,596	22,000,368
S.P. skinned hams	49,451,138	40,710,612	51,894,578
S.P. bellies	45,788,301	38,903,959	41,740,011
D.S. bellies	15,232,465	9,723,582	15,749,593
D.S. fat backs	9,235,482	7,205,460	11,098,044
S.P. picnic	16,299,464	11,813,232	14,234,553

HOW SHORT FORM HOG CUTTING TEST RESULTS ARE FIGURED

(Hog prices and product values based on THE NATIONAL PROVISIONER DAILY MARKET SERVICE, cutting percentages taken from actual tests in Chicago plants.)

	Per Cent live wt.	Price per lb.	Value per cwt. alive		Per Cent live wt.	Price per lb.	Value per cwt. alive		Per Cent live wt.	Price per lb.	Value per cwt. alive
180-220 lbs.				220-260 lbs.				260-300 lbs.			
Regular hams	14.00	16.0	\$ 2.24	13.70	15.2	\$ 2.08	13.50	14.3	\$ 1.93		
Picnics	5.60	11.1	.62	5.40	10.5	.57	5.10	10.3	.53		
Boston butts	4.00	14.2	.57	4.00	14.0	.56	4.00	13.8	.55		
Loins (blade in)	9.80	15.3	1.50	9.60	13.8	1.32	9.10	13.0	1.18		
Bellies, S. P.	11.00	13.9	1.53	9.70	13.5	1.31	3.10	11.5	.35		
Bellies, D. S.				2.00	9.3	.19	9.90	8.9	.88		
Fat backs	1.00	4.2	.05	3.00	4.7	.14	5.00	5.9	.30		
Plates and jowls	2.50	5.3	.13	3.00	5.3	.16	3.30	5.3	.17		
Raw leaf	2.10	5.8	.12	2.20	5.8	.13	2.10	5.8	.12		
P. S. lard, rend, wt.	12.40	6.2	.77	11.50	6.2	.71	10.20	6.2	.63		
Spareribs	1.60	11.3	.18	1.60	11.2	.18	1.50	11.1	.17		
Trimnings	3.00	7.6	.23	2.80	7.6	.23	2.70	7.6	.21		
Feet, tails, neckbones	2.00		.11	2.00		.11	2.00		.11		
Offal and misc.			.30			.30			.30		
TOTAL YIELD AND VALUE	69.00		\$ 8.35	70.50		\$ 7.99	71.50		\$ 7.43		
Cost of hogs per cwt.		\$ 8.03			\$ 7.85			\$ 7.63			
Condemnation loss		.04			.04			.04			
Handling & overhead		.62			.53			.45			
TOTAL COST PER CWT. ALIVE		\$ 8.69			\$ 8.42			\$ 8.12			
TOTAL VALUE		8.35			7.99			7.43			
Loss per cwt.		.34			.43			.69			
Loss per hog		\$.68			\$ 1.03			\$ 1.93			

Chicago Provision Markets

REPORTED BY THE NATIONAL PROVISIONER DAILY MARKET SERVICE

CASH PRICES

Based on actual carlot trading Thursday, February 2, 1939.

REGULAR HAMS.		
Green.	*S. P.	
8-10	17%	17%
10-12	17%	17%
12-14	16%	17
14-16	16%	16%
16-18	16%	16%

BOILING HAMS.		
Green.	*S. P.	
16-18	15%	15%
18-20	14%	15%
20-22	14%	15 1/2
16-20	14%	15
16-22	14%	15

SKINNED HAMS.		
Green.	*S. P.	
10-12	18 1/2	18 1/2
12-14	17 1/2	18
14-16	16	17
16-18	16 1/2	16 1/2
18-20	16	16 1/2
20-22	16	16 1/2
22-24	16	16 1/2
24-26	15	15
26-30	13 1/2	14 1/2
25-up, No. 2's inc.	13	13

PICNICS.		
Green.	*S. P.	
4-6	12 1/2	12 1/2
6-8	10%	11 1/2
8-10	10%	11
10-12	10%	11
12-14	10%	11
8-up, No. 2's inc.	10%	11

BELLIES.		
(Square cut seedless.)		
Green.	*D. C.	
6-8	15 1/2	16
8-10	14 1/2	15 1/2
10-12	13	14
12-14	12 1/2	13 1/2
14-16	11 1/2	12 1/2
16-18	11 1/2	12 1/2

*Quotations represent No. 1 new cure.

D. S. BELLIES.		
Clear.	Rib.	
14-16	10 1/2	10 1/2
16-18	10 1/2	10 1/2
18-20	10	10
20-25	9 1/2	9 1/2
25-30	9 1/2	9 1/2
30-35	9 1/2	9 1/2
35-40	9 1/2	9 1/2
40-50	8 1/2	8 1/2

D. S. FAT BACKS.		
6-8	5 1/2	5 1/2
8-10	5 1/2	5 1/2
10-12	6	6
12-14	6 1/2	6 1/2
14-16	7 1/2	7 1/2
16-18	7 1/2	7 1/2
18-20	7 1/2	7 1/2
20-25	8 1/2	8 1/2

OTHER D. S. MEATS.		
Extra Short Clears.	35-45	9n
Extra Short Ribs	35-45	9n
Regular Plates	6-8	7 1/2
Clear Plates	4-6	5 1/2
Jowl Butts	6	6
Green Square Jowls	7 1/2	7 1/2
Green Rough Jowls	6	6

LARD.		
Prime Steam, cash.	6.67 1/2	n
Prime Steam, loose.	6.10	n
Neutral, in tierces.	8.12 1/2	n
Raw Leaf	6.12 1/2	n

CHICAGO PROV. SHIPMENTS

Provision shipments from Chicago for week ended January 28, 1939, were:

Week	Previous	Same
Jan. 28.	Week.	Time '38.
Cured Meats, lbs. 14,063,000	16,159,000	15,757,000
Fresh Meats, lbs. 50,050,000	49,512,000	57,816,000
Lard, lbs. 2,869,000	4,230,000	1,351,000

FUTURE PRICES

SATURDAY, JANUARY 28, 1939.

LARD—		Open.	High.	Low.	Close.
Mar.	6.75	6.75	6.72 1/2	6.72 1/2	ax
May	6.87 1/2	6.80	6.87 1/2	6.87 1/2	ax
July	7.07 1/2	7.07 1/2	7.05	7.05	
Sept.	7.20	7.22 1/2	7.20	7.20	ax
Oct.	7.25	7.25	7.25	7.25	ax

MONDAY, JANUARY 30, 1939.

LARD—		Open.	High.	Low.	Close.
Jan.	6.60	6.60	6.60	6.60	
Mar.	6.90	6.90	6.85	6.85	
May	7.05	7.05	7.05	7.05	
July	7.25	7.25	7.25	7.25	ax
Sept.	7.35	7.35	7.35	7.35	
Oct.	7.40	7.40	7.40	7.40	

TUESDAY, JANUARY 31, 1939.

LARD—		Open.	High.	Low.	Close.
Jan.	6.50	6.52 1/2	6.50	6.52 1/2	b
Mar.	6.87 1/2	6.87 1/2	6.85	6.85	ax
May	7.05	7.05	6.97 1/2	6.97 1/2	b
July	7.20	7.20	7.15	7.15	ax
Sept.	7.30	7.30	7.25	7.25	
Oct.	7.32 1/2	7.32 1/2	7.32 1/2	7.32 1/2	

WEDNESDAY, FEBRUARY 1, 1939.

LARD—		Open.	High.	Low.	Close.
Mar.	6.80	6.80	6.80	6.80	
May	6.92 1/2	6.95	6.92 1/2	6.92 1/2	
July	7.12 1/2	7.10	7.10	7.10	
Sept.	7.27 1/2	7.25	7.25	7.25	
Oct.	7.30	7.30	7.30	7.30	ax

THURSDAY, FEBRUARY 2, 1939.

LARD—		Open.	High.	Low.	Close.
Jan.	6.60	6.60	6.60	6.60	
Mar.	6.92 1/2	6.95	6.92 1/2	6.92 1/2	ax
May	7.02 1/2	7.05	7.02 1/2	7.02 1/2	ax
July	7.22 1/2	7.20	7.22 1/2	7.22 1/2	ax
Sept.	7.40	7.40	7.35	7.35	b
Oct.	7.40	7.40	7.37 1/2	7.37 1/2	b

FRIDAY, FEBRUARY 3, 1939.

LARD—		Open.	High.	Low.	Close.
Mar.	6.67 1/2	6.67 1/2	6.60	6.60	
May	6.85	6.85	6.75	6.75	b
July	7.02 1/2	7.02 1/2	6.92 1/2	6.92 1/2	b
Sept.	7.15	7.15	7.07 1/2	7.07 1/2	b
Oct.	7.12 1/2	7.12 1/2	7.10	7.10	

Key: ax, asked; b, bid; n, nominal; —, split.

PORK PRODUCTS EXPORTS

Exports of provisions originating in the United States and Canada from Atlantic and Gulf ports:

To	Week ended Jan. 28, 1939.	Week ended Jan. 29, 1939.	From Nov. 1, 1938, to Jan. 28, 1939.
United Kingdom	30	30	30
Continent	25	25	25
Total	55	55	55

BACON AND HAMS.

	M lbs.	M lbs.	M lbs.
United Kingdom	3,618	4,684	49,459
Continent	106	13	3,887
West Indies	9	46	63
B. N. A. Colonies	1	1	16
Other Countries	...	...	6
Total	3,734	4,743	53,431

LARD.

	M lbs.	M lbs.	M lbs.
United Kingdom	4,307	3,348	41,332
Continent	96	14	2,481
West Indies	121	...	2,298
West India	157	2	1,114
B. N. A. Colonies	...	...	67
Other Countries	33	...	33
Total	4,714	3,364	47,325

TOTAL EXPORTS BY PORTS.

From	Bacon and Pork, bbls.	Hams, M lbs.	Lard, M lbs.
New York	322	1,696	210
Boston	...	...	310
New Orleans	...	1,955	1,708
W. St. Johns	1,457	829	...
Hallfax	...	3,734	4,714
Total Week	25	3,521	4,836
Previous Week	...	3,817	5,164
2 weeks ago	...	4,742	3,364
Cor. week 1938	...	...	...

SUMMARY NOV. 1, 1938, TO JAN. 28, 1939.

	1938-39.	1937-38.
Pork, M lbs.	11	6
Bacon and Hams, M lbs.	53,431	43,045
Lard, M lbs.	47,325	50,951

FOREIGN PORK COMPETITION

"Hog growing countries of Europe are trying to increase their cured product sales in the United States, and if this country keeps these shipments out it will have to be done by improved American methods," said Dr. Steve Komarik, of The Griffith Laboratories, Chicago, on his return recently from an extended trip to Europe. Dr. Komarik found many packing companies using Prague powder and the methods prescribed by his company. "These people have gained their knowledge of operations through THE NATIONAL PROVISIONER," he said, "as I found this magazine on the desk of every foreign packer." Dr. Komarik visited Ireland, England, Holland, Germany, Hungary, Roumania and Poland, during the course of his stay abroad.

CANADIAN EXPORTS TO U. S.

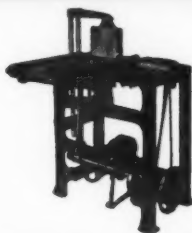
	November, 1938.	November, 1937.
Cattle, No.	21,016	8,113
Calves, No.	2,688	2,752
Hogs, No.	9	940
Sheep, No.	503	628
Beef, lbs.	106,500	310,000
Bacon, lbs.	48,300	125,500
Pork, lbs.	154,800	502,300
Mutton and lamb, lbs.
Canned meat, lbs.	24	47
Lard compound	...	400

WHY PETERS

LARD AND SHORTENING

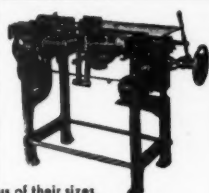
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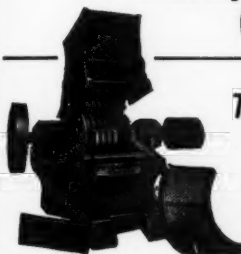
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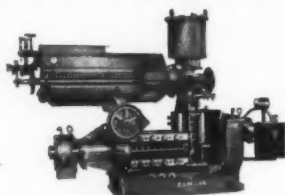
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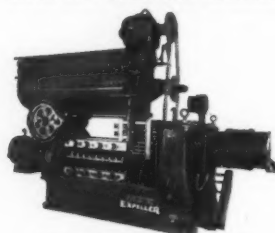
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Why there are three

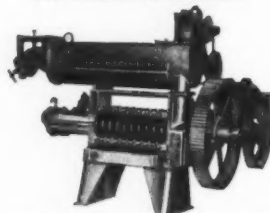
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SUPER DUO CRACKLING EXPELLER



DUO CRACKLING EXPELLER



RED LION CRACKLING EXPELLER

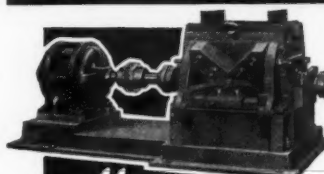
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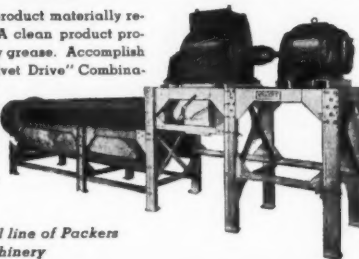
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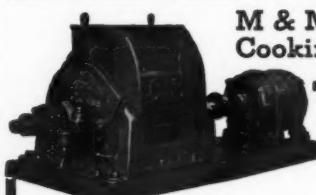
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Tallows and Greases

WEEKLY MARKET REVIEW

TALLOW.—The tallow market at New York was very quiet and steady during the past week with little indication of business. Consumers were reported to be displaying some interest in March delivery of supplies, but owing to many uncertainties in the general situation, producers were not inclined to sell ahead. As a result, offerings were light and firmly held and the trade was disposed to go slow.

At New York, extra was quoted at 5½c, delivered; special, 5½c, and edible loose, 6½c nominal.

Foreign tallow offerings at New York were unchanged in price from the previous week. South American No. 1 was quoted at 3¼c; No. 2, 3c, and edible, 3½c.

Tallow futures at New York were quiet and about steady. Values were unchanged to 5 lower on the week.

There was no London tallow auction this week. At Liverpool, Argentine beef tallow, February-March shipment, was up 6d on the week at 17s. Australian good mixed at Liverpool, February-March shipment, was unchanged at 17s 3d.

Tallows were steady and quiet early this week at Chicago with main buying interest in March; market appeared to be firming up as week closed. Some producers were fairly well sold ahead and prime and special were salable to large consumers at list, Cincinnati, for late February-March delivery. Tank special sold Monday at 5¼c, Chicago, and 5½c was bid for edible in drums, delivered; available in tanks at market, f.o.b. shipping points. Offerings were very moderate and salable at list for March delivery; interest in earlier delivery was limited. Round lot edible sold Thursday at 5½c, delivered Cincinnati, for soap kettle, equal to about 5½c, f.o.b. shipping point; prime salable at 5½c, Chicago, prompt, in moderate way. Special was salable at 5¼c and No. 1, 21 color, at 5½c, Cincinnati, and No. 3 at 5c, Mideast. Chicago quotations, loose basis, on Thursday:

Edible tallow	5½@5¼
Fancy tallow	@5¼
Prime packers	@5¼
Special tallow	@5¼
No. 1 tallow	@5¼

STEARINE.—According to reports the stocks of stearine at New York are closely sold up. Oleo was unchanged this week and quoted at 6¼c. However, a few cars were reported to have sold from the West to Eastern ports at 6½c, delivered, or up ½c from previous sales to the same destinations.

The Chicago market was steady with oleo stearine quoted at 6¼c.

OLEO OIL.—Demand was rather moderate at New York and prices were unchanged to ¼c lower. Extra was

quoted at 7¼c; prime, 7@7½c, and lower grades, 6¾@7½c.

The Chicago market was steady and unchanged. Extra oleo oil was quoted at 8c and prime at 7¾c.

LARD OIL.—The market was routine at New York with prices steady and unchanged. No. 1 was quoted at 9c; No. 2, 8¾c; extra, 9¾c; extra No. 1, 9¾c; extra winter strained, 9½c; prime burning, 10c, and inedible, 9¾c.

(See page 35 for later markets.)

NEATSFOOT OIL.—The market was quiet and unchanged at New York. Cold test was quoted at 15¼c; extra, 9¼c; No. 1, 9c; prime, 9½c, and pure, 11¾c.

GREASES.—Trade in greases was quiet at New York during the past week. Consumers and producers were inclined to hold to the sidelines awaiting some new developments. While most consumers showed interest in yellow and house at around 4¼c, there were some inquiries at 4½c, but offerings were lacking under the 5c level. Steadiness in tallow attracted attention in selling quarters but consumers were not inclined to come up in their ideas at the moment.

At New York, brown was quoted at 4¾@4½c; yellow and house, 4¾@5c, and choice white, 5½c.

Grease market at Chicago was quiet but steady this week. White grease was salable at 5½c, Chicago, last week-end. Light offerings held the market steady. Tank 15 acid yellow grease sold Tuesday at 4¼c, Chicago. Quotations on Thursday were:

Choice white grease	@5½
A-white grease	5½@5¼
B-white	5@5½
Yellow grease, 10-15 f.f.a.	@4½
Yellow grease, 15-20 f.f.a.	@4½
Brown grease	4½@4¼

BY-PRODUCTS MARKETS

Chicago, February 2, 1939.

All by-product markets very quiet this week with little product moving.

Blood.

Domestic blood sold late last week at \$3.30 top but buyers' ideas now much lower.

	Unit
	Ammonia.
Unground	@ 3.25a

Digester Feed Tankage Materials.

One car 11-12 feeding material sold this week at \$3.50. Prices largely nominal.

Unground, 11 to 12% ammonia	@ 3.50
Unground, 6 to 10%, choice quality	@ 3.75a
Liquid stick	@ 2.60

Packinghouse Feeds.

Demand quiet, prices unchanged.

	Carlots, Per ton.
Digester tankage meat meal, 60%....	@55.00
Meat and bone scraps, 50%.....	@50.00
Blood meal	@70.00
Special steam bone-meal.....	@50.00

Bone Meals (Fertilizer Grades).

Bone meal market unchanged at quoted prices.

	Per ton.
Steam, ground, 3 & 50.....	\$24.00@25.00
Steam, ground, 2 & 26.....	\$4.00@25.00

Fertilizer Materials.

Market quiet and practically no product moving.

	Per ton.
High grd. tankage, ground	
10@11% am.	@ 3.25a
Bone tankage, ungrd., per ton.....	22.50@25.00
Hoof meal	@ 2.75

Dry Rendered Tankage.

Bulk of cracklings sold this week at 70c. Limited quantity at 72½c and one sale reported at 75c. Other sales reported as low as 67½c.

Hard pressed and expeller unground, per unit protein	@ .70
Soft prod. pork, ac. grease and quality, ton	@50.00
Soft prod. beef, ac. grease & qual- ity, ton	@40.00

Gelatine and Glue Stocks.

Little product moving because of low value of gelatine and glue materials. Prices unchanged.

	Per ton.
Calf trimmings	@18.00
Sinews, plizles	@16.00
Cattle jaws, skulls and knuckles....	@22.00
Hide trimmings	@12.00
Pig skin scraps and trim, per lb., l.c.l.	3@ 3½c

Horns, Bones and Hoofs.

Market slow and prices unchanged.

	Per ton.
Horns, according to grade.....	\$35.00@60.00
Cattle hoofs, house run.....	28.00@30.00
Junk bones	16.00@18.00
(Note—foregoing prices are for mixed carloads of unassorted materials.)	

Animal Hair.

Hair market continues quiet with prices unchanged.

Winter coll dried, per ton.....	\$35.00@40.00
Summer coll dried, per ton.....	22.50@25.00
Winter processed, black, lb.....	6@ 6½c
Winter processed, gray, lb.....	5@ 5½c
Cattle switches	1½@ 2c

EASTERN FERTILIZER MARKETS

(Special Wire to The National Provisioner.)

New York, February 1, 1939.

Dried blood sold at \$3.25 per unit of

ammonia, f.o.b New York, which is the present quotation. The demand is light. South American is offered for February shipment at \$2.90 per unit c.i.f. Atlantic and Gulf Coast ports.

Unground feeding tankage sold at \$3.35 and 10c New York. Ground fertilizer tankage sold at \$3.25 and 10c basis f.o.b., New York. There is no unground feeding tankage available in this market at present as producers are sold up. South American ground tankage is offered and has been sold recently at \$3.15 and 10c, c.i.f. Atlantic Coast ports. There is little change in price, one way or the other, with respect to dry rendered tankage. The last sales of 55 per cent protein unground were at 70c per unit, f.o.b. local producing points.

FERTILIZER PRICES

BASIS NEW YORK DELIVERY.

Ammoniates.

Ammonium sulphate, bulk, per ton, basis ex-vessel Atlantic ports, February to June, 1939, inclusive.....	@28.00
Blood, dried, 16% per unit.....	@ 3.35
Unground fish scrap, dried, 11½% ammonia, 15% B. P. L., f.o.b. fish factory.....	nominal
Fish meal, foreign, 11½% ammonia, 10% B. P. L., c.i.f. spot.....	@48.50
Feb. shipments.....	@48.50
Fish scrap, acidulated, 7% ammonia, 3% A. P. A., f.o.b. fish factories.....	2.50 & 50c
Soda nitrate, per net ton; bulk, Feb. to June 1939 inclusive, ex-vessel Atlantic and Gulf ports.....	@27.00
in 200-lb. bags.....	@28.30
in 100-lb. bags.....	@29.00
Tankage, ground, 10% ammonia, 10% B. P. L., bulk.....	3.25 & 10c
Tankage, unground, 10-12% ammonia, 15% B. P. L., bulk.....	3.35 & 10c

Phosphates.

Foreign bone meal, steamed, 3 and 50 bags, per ton, c.i.f.....	@22.75
Bone meal, raw, 4½% and 50%, in bags, per ton, c.i.f.....	@26.00
Superphosphate, bulk, f.o.b. Baltimore, per ton, 16% fat.....	@ 8.00

Dry Rendered Tankage.

50% protein, unground.....	@70c
60% protein, unground.....	@72½c

TALLOW FUTURE TRADING

MONDAY, JANUARY 30, 1939.

	High.	Low.	Close.
February.....	5.35	5.30	5.35
March.....	5.35	5.30	5.35
April.....	5.35	5.30	5.35
May.....	5.45	5.40	5.45
June.....	5.45	5.40	5.45
July.....	5.50	5.45	5.50

TUESDAY, JANUARY 31, 1939.

February.....	5.35	5.30	5.35
March.....	5.35	5.30	5.35
May.....	5.45	5.40	5.45
June.....	5.45	5.40	5.45
July.....	5.50	5.45	5.50

WEDNESDAY, FEBRUARY 1, 1939.

February.....	5.35	5.30	5.35
March.....	5.35	5.30	5.35
April.....	5.35	5.30	5.35
May.....	5.50	5.45	5.50
June.....	5.50	5.45	5.50
July.....	5.50	5.45	5.50

THURSDAY, FEBRUARY 2, 1939.

February.....	5.40	5.35	5.40 b
March.....	5.40	5.35	5.40 b
April.....	5.40	5.35	5.40 b
May.....	5.50	5.45	5.50 b
June.....	5.50	5.45	5.50 b
July.....	5.50	5.45	5.50 b

FRIDAY, FEBRUARY 3, 1939.

March.....	5.35	5.30	5.35
May.....	5.40	5.35	5.40
July.....	5.50	5.45	5.50

FAT IMPORTS DROP SHARPLY

Imports of fats and oils into the United States during 1938 declined approximately one-third from the 1937 level, according to a preliminary survey by Charles E. Lund of the U. S. Department of Commerce.

Aggregate receipts of all vegetable, animal and fish oils, and fats (including the oil equivalent of imported oilseeds) amounted in 1938 to 1,901 million lbs., compared with 2,829 million lbs. in 1937, 2,337 million lbs. in 1936 and 2,640 million lbs. in 1935.

A number of factors were responsible for the unusually sharp decrease in 1938 of purchases of fats and oils abroad, the review points out. Among these were increased domestic production of lard, tallow and soy beans, the heavy fats and oils carry-over from 1937, the marketing of cottonseed oil from the record 1937 crop and the slow demand which featured the early part of the year.

Consumption of fats and oils (including butter and lard) in the United States has risen from 5 billion lbs. annually 25 years ago to approximately 9 billion lbs. at the present time. Although this country produces about one-fifth of the world's annual oilseed crop, it has for many years been obliged to import a large volume of fats and oils to meet the increasing demands for these items from a wide range of American industries.

BY-PRODUCTS PRICES

High and low prices of fats, oils and by-products by months during the period 1928-1938, inclusive, have been issued in booklet form by the Davidson Commission Co., Chicago packinghouse and by-products brokers. Included in the bulletin are prices of prime steam lard, D. S. bellies, cottonseed oil, corn oil, oleo stearine, edible tallow, prime tallow, No. 1 tallow, choice white grease, yellow grease, brown grease, No. 2 packer's tallow, A white grease stearine, yellow grease stearine, high grade feeding tankage, ground blood, ground fertilizer tankage and prices of cake and expeller cracklings during the past six years and soybean oil and coconut oil during the past three years.

The company specializes in the handling of animal glands, tallow, grease, oils, fatty acids, tankage, cracklings, fishmeal, blood, bones, glue-stock and fertilizer materials. Copy of the new edition of the booklet giving the price ranges of products listed can be secured free as long as the supply lasts by addressing the company offices in the Utilities Bldg., 327 S. La Salle St., Chicago.

HULL OIL MARKETS

Hull, England, February 1, 1939.—Refined cotton oil, 20s. Egyptian crude was quoted at 17s.

MARGARINE MATERIALS USED

Products used in margarine manufacture during December, 1938, compared with the quantities used in the same month a year ago are reported as follows:

	Dec. 1938, lbs.	Dec. 1937, lbs.
Ingredient schedule of uncolored oleomargarine:		
Babassu oil.....	614,791	664,345
Coconut oil.....	7,160,309	6,218,179
Corn oil.....	134,763	161,167
Cottonseed oil.....	10,563,896	18,915,066
Derivative of glycerine.....	74,890	110,069
Lecithin.....	9,714	6,092
Milk.....	5,804,222	6,652,639
Neutral lard.....	100,962	186,928
Oleo oil.....	994,400	682,490
Oleo stearine.....	236,979	254,778
Oleo stock.....	116,609	44,608
Palm kernel oil.....	98,472	515,277
Peanut oil.....	231,826	145,188
Salt.....	1,238,503	1,729,459
Soda (Benzonate of).....	12,488	13,694
Soya bean oil.....	4,174,633	2,725,985
Vitamin concentrate.....	1,282	331
Total.....	31,568,729	39,017,236

Ingredient schedule of colored oleomargarine:		
Coconut oil.....	43,063	6,722
Color.....	153	117
Corn oil.....	54	12
Cottonseed oil.....	12,856	54,589
Derivative of glycerine.....	380	271
Lecithin.....	3	...
Milk.....	25,978	28,808
Neutral lard.....	3,624	4,335
Oleo oil.....	14,936	20,246
Oleo stearine.....	...	1,092
Oleo stock.....	719	514
Palm kernel oil.....	218	975
Peanut oil.....	37	7
Salt.....	6,921	8,735
Soda (Benzonate of).....	55	27
Soya bean oil.....	23,785	9,575
Vitamin concentrate.....	3	...
Total.....	133,385	135,935

MARGARINE LAWS UNPOPULAR

Popular disapproval of restrictive and prohibitive margarine laws has been expressed in several states by repeal of such legislation through referendums, according to a recent statement by J. S. Abbott, director of research, National Association of Margarine Manufacturers.

Voters of Oregon rejected four restrictive margarine laws between 1920 and 1933, all of them by large majorities. In spite of public disapproval of measures enacted in 1919 and 1923, the Oregon legislature passed others in 1931 and 1933 and these were in turn nullified. California has had two experiments with margarine legislation and both laws have failed to gain public favor.

Legislatures of Colorado, Washington, Michigan and Oklahoma have also passed margarine laws, only to have them repealed by the people. A Kentucky act taxing margarine 10 cents a pound was killed by the U. S. Supreme Court and a Wisconsin measure prohibiting use of milk in margarine was declared unconstitutional by the state's Supreme Court.

LARD AND GREASE EXPORTS

Exports of lard from New York City, week of January 28, 1939, totaled 1,666,375 lbs.; tallow, none; greases 55,600 lbs.; stearine, none.

Vegetable Oils

WEEKLY MARKET REVIEW

NEW YORK cottonseed oil futures backed and filled around the season's low point in mixed trade during the past week. Daily turnover was satisfactory, but the market continued to suffer from liquidation and selling influenced by easiness in lard. There were pessimistic reports on consumer demand for oil and shortening and at one time the market was disturbed by apprehension over the European situation.

There was little new in the situation surrounding the cottonseed oil market. While the price relationship of cottonseed oil with coconut oil has been improved, lard, cotton oil's chief competitor, is still relatively cheap, as is soybean oil.

Reports from cash circles indicated that demand for oil and shortening was moderate, although there were spurts of better activity and absorption at times during the week. These were not large enough to raise hopes of a favorable January consumption report. Many around the ring expect that January oil consumption will be reported under 200,000 bbls. rather than over that figure. Consumption in December, 1938, was about 210,000 bbls. and amounted to 356,000 bbls. in January, 1939.

Short Covering Aids Market

While liquidation was apparent at times in cottonseed oil, the market was aided by considerable covering by shorts. Commission houses continued to switch March oil to the later positions, presumably transferring long accounts, with March selling about 25 points under July and about 30 points under September.

Washington reports on plans for curtailment of cotton acreage were followed closely by the trade. A private report pointed to a 1939 cotton planting of 26,620,000 acres which compares with 26,144,000 acres planted last year and with the 1939 allotment of 27,543,000 acres. The report stated that farmers are not looking for any changes in the farm program during the current year.

The question of cotton acreage is as important to cottonseed oil as it is to cotton. Should there be further restriction of production it would undoubtedly be constructed as helpful to oil prices.

Crude markets were rather quiet but steady. Only moderate trading was reported from the South, with the Southeast and Valley selling at 5½c and Texas at 5½ to 5½c, according to location.

Spreaders were not very active in the oil market during the past week but there did appear to be some selling of oil against purchases of lard and cotton.

COCONUT OIL.—Sellers' ideas at New York were reported around 3½c

and on the Pacific Coast at 2½c. There were moderate inquiries at a shade under these levels.

SOYBEAN OIL.—Interest was rather quiet at New York but the market was steady. Nearby was quoted at 4½ to 4¾c, while on forward deliveries sellers' ideas were reported around 5c.

CORN OIL.—Interest was quiet at New York and the market was quoted at 6½ to 6¾c.

PALM OIL.—The market was quiet and steady at New York with demand reported to be limited. Nigre was quoted at 3.05c and Sumatra at 2¾c.

PALM KERNEL OIL.—The market at New York was 3½c nominal.

OLIVE OIL FOOTS.—Trade was quiet at New York, but prices were steady at 6½ to 6¾c, tank basis.

PEANUT OIL.—The market was more or less nominal at New York around 6 to 6¼c.

COTTONSEED OIL.—Valley and Southeast crude was quoted Wednesday at 5½c nominal; Texas, 5½ to 5½c nom. at common points, Dallas, 5½c nom.

DECEMBER MARGARINE PRODUCTION

Margarine produced during December, 1938, with comparisons, as reported by manufacturers, shows a production of 81 per cent of December, 1937.

	Dec. 1938, lbs.	Dec. 1937, lbs.
Production of uncolored margarine	30,252,565	37,273,984
Production of colored margarine	120,858	117,213
Total production	30,373,423	37,391,197
Uncolored margarine with drawn tax paid	29,936,607	36,388,855
Colored margarine with drawn tax paid	34,358	57,126

SOUTHERN MARKETS

New Orleans.

(Special Wire to The National Provisioner.)

New Orleans, La., February 2, 1939. Cotton oil futures were the same as a week ago. Crude oil was also unchanged at 5½c-5½c lb. f.o.b. mills, with offerings light. Bleachable was steady. Soapstock supply was limited. Hogs were higher, which with corn tend to stabilize oil for the time being. Underlying conditions are improving.

Dallas.

(Special Wire to The National Provisioner.)

Dallas, Texas, February 2, 1939.—Forty-three per cent cottonseed cake and meal, Dallas basis, for interstate shipment, \$23.75. Basis prime cottonseed oil 5.45 to 5.55c depending on location.

COTTON OIL TRADING

Cottonseed oil futures market transactions at New York for the week were as follows:

FRIDAY, JANUARY 27, 1939.

	Sales.	High.	Low.	Bid.	Askd.
Feb.	21	693	691	690	nom
Mar.	..	..	..	693	695
April	..	..	..	695	nom
May	20	705	703	706	707
June	..	..	..	706	nom
July	65	716	710	715	716
Aug.	..	..	..	715	nom
Sept.	18	720	717	720	721

SATURDAY, JANUARY 28, 1939.

Feb.	..	..	..	690	nom
Mar.	..	..	..	690	693
April	..	..	..	695	nom
May	1	705	705	702	705
June	..	..	..	705	nom
July	14	715	713	714	trad
Aug.	..	..	..	715	nom
Sept.	5	722	721	718	719

MONDAY, JANUARY 30, 1939.

Feb.	..	..	..	695	nom
Mar.	6	698	689	695	697
April	..	..	..	695	nom
May	1	712	712	708	711
June	..	..	..	710	nom
July	24	721	715	718	trad
Aug.	..	..	..	720	nom
Sept.	20	726	717	723	24tr

TUESDAY, JANUARY 31, 1939.

Feb.	..	..	..	690	nom
Mar.	13	698	690	690	693
April	..	..	..	690	nom
May	9	713	705	705	707
June	..	..	..	705	nom
July	31	722	715	716	trad
Aug.	..	..	..	716	nom
Sept.	19	727	719	720	723

WEDNESDAY, FEBRUARY 1, 1939.

Feb.	..	..	..	690	nom
Mar.	48	690	688	690	trad
April	..	..	..	690	nom
May	17	705	704	702	704
June	..	..	..	705	nom
July	42	713	713	712	713
Aug.	..	..	..	712	nom
Sept.	37	720	718	718	19tr

THURSDAY, FEBRUARY 2, 1939.

March	..	687	679	679	bid
May	..	704	693	694	nom
September	..	710	700	700	nom
	..	715	702	702	nom

Sales, 253 contracts.

(See page 35 for later markets.)

NEW MARGARINE BILLS

Dealers handling uncolored margarine made from domestic fats and oils would be relieved of the federal license tax on retailers, under a bill introduced in Congress recently by Representative Richard M. Kleberg. One of two other measures introduced by the same congressman would impose a special excise tax of 10 cents per pound on margarine containing any imported fats.

Another bill would define as adulterated any margarine containing less than 80 per cent of fat by weight, and would prohibit its introduction into interstate commerce.

Representative Francis D. Culkin has introduced a bill which would impose a special tax of 10 cents per pound on all margarine, and another which would prohibit manufacture, importation and interstate shipment of butter substitutes made from fats other than those of milk or cream.

Hides and Skins

WEEKLY MARKET REVIEW

Chicago

PACKER HIDES.—Steady prices prevailed in a moderate scattered movement of packer hides this week, with total sales so far of about 40,000 hides. The trading at the end of last week brought the total for that week to slightly over 100,000 hides, but follow-up business did not appear this week on the scale expected.

Hide futures fluctuated with the securities markets, and at present are 7@9 points over last Friday, but the advance has not been sufficient to stimulate interest in the winter take-off light native cows from northern points. Increased activity is reported among shoe manufacturers but leather business has not improved to any extent. Until leather begins to move in fair volume, tanners are inclined to adopt a cautious attitude toward the raw stock market.

Native steers are quoted 10½c nom. for winter quality. Extreme light native steers sold last week at 10½c for Nov. to Jan. take-off.

Two packers sold a total of about 3,800 Nov. to Jan. butt branded steers at 10½c, steady; broad movement previous week that basis, and also on Colorado at 10c for similar take-off. Heavy Texas steers quoted 10½c, last paid previous week. About 2,800 Nov. to Jan. light Texas steers moved this week at 9½c. Extreme light Texas steers quotable at 10c.

Two packers sold 3,000 Nov.-Dec. heavy native cows early at 10c, and Association moved 1,400 Jan. at 10c; trade broadened when earlier take-off was included and total of 12,100 Sept. to Nov. heavy native cows moved later at 10c. One lot of 5,000 Nov. to Jan. light native cows sold at week-end at 10½c, steady with price paid late last week; Association sold 3,000 Jan. light cows early at 10½c; 2,500 more were sold by packers at 10½c, and 2,200 Oct.-Nov. River point light cows at 10¼c, slight premium for dating. One lot of 3,000 Jan. branded cows sold early at 10c, and Association also sold 2,000 Jan. take-off at 10c; outside packers sold 7,000 early at 10c.

Native bulls last sold at 7¼c, and branded bulls at 6¼c, with Sept. forward take-off included; buyers' ideas lower.

OUTSIDE SMALL PACKER HIDES.—Some fairly good lots of outside small packer hides of early winter take-off were offered this week basis 10c, selected, Chgo. freight, for natives, and ½c less for brands, without attracting counter-bids. Tanner buyers' ideas seem to be around 9c, to possibly 9½c for choice light average stock, and trading awaited to establish values.

PACIFIC COAST.—Sales of 8,500 Dec. hides were reported to have been

made in the Coast market late this week basis 8½c for steers and 8c for cows, flat, f.o.b. shipping points.

FOREIGN WET SALTED HIDES.—The South American market was fairly active during the week, easing off about ¾c on standard steers and later recovering the loss; European buyers accounted for a good part of the trade. Late last week, 2,000 LaBlanca light steers sold to Europe at 68 pesos, equal to about 10½c, c.i.f. New York, followed by 4,500 frigorifico light steers equal to 10½c. A pack of 4,000 LaBlanca standard steers, and 12,000 more Argentine steers, sold over the week-end and early this week at 71 pesos, equal to 11c, c.i.f. New York, some figuring 11¼c, as against 72 pesos or 11¾c paid earlier last week; 2,000 Smithfield steers sold later at 71 pesos or 11c. Later, 4,000 Sansinena steers sold at 72 pesos or 11¾c; 4,000 Sansinena reject steers moved at 67 pesos or 10¾c, as against 65 pesos or 10¾c paid last week.

COUNTRY HIDES.—Trade in country hides is limited. Receipts have been light and apparently the country butcher production so far this year has been limited, partly due to the mild weather. Dealers' holdings are rather small and they appear willing to accumulate a few hides at these levels; not being anxious to sell, their asking prices are usually kept above buyers' paying limits. Offerings of all-weights are limited around 8@8¼c, selected, del'd Chgo., some asking 8½c. Heavy steers and cows dull and nominal at 7@7¼c. Trimmed buff weights are hard to find under 8¼@8½c. Extremes are salable at 10c, trimmed, but not many offered at the asking price of 10½c, although this appears over the market. Bulls quoted 5½@5¾c nom. All-weight branded hides listed 7@7¼c flat.

CALFSKINS.—Packer calfskins eased off another ¼c this week on sales of Jan. heavy calf, 9½/15 lb.; one packer sold 30,000 Jan. northern heavies, another packer 10,000, and a third packer 3,900 Jan. St. Paul heavies, all at 18½c. Jan. lights, under 9½ lb., moved in a good way previous week at 18c, and Milwaukee all-weight packers at 18¼c.

One collector was credited with selling a car of Chicago city 8/10 lb. calfskins late this week at 15½c, and a car 10/15 lb. at 16½c; bids at ½c less had been available earlier. Outside cities, 8/15 lb., quoted 15½@16c nom.; straight countries 11½@12c flat. Another car Chicago city light calf and deacons sold this week at \$1.07½, steady.

KIPSKINS.—Three packers sold a total of 2,400 Dec. northern over-weight

kipskins early this week at 14½c, cleaning up Dec. production, and indicating a half-cent decline. Later, one packer sold Jan. production of northern over-weights also at 14½c. On this basis, northern natives are quoted around 15½c nom., southern natives the usual cent less. Dec. branded kips last sold at 13½c; quoted around 13c nom., pending further trading on Jan. production.

Chicago city kipskins quiet and quoted nominally around 13½c. Outside cities about 13@13½c; straight countries around 10½c flat.

LATER: One packer sold 5,000 Jan. regular slunks at 80c, steady.

HORSE HIDES.—Market called steadier on horsehides, with slightly better prices usually asked. Good city renderers, with manes and tails, held at \$3.10@3.20, selected, f.o.b. shipping points; ordinary trimmed renderers \$2.85@3.00; mixed city and country lots \$2.50@2.75, according to lot.

SHEEPSKINS.—Dry pelts nominal at 14@15c per lb., del'd Chgo., for full wools. Production of packer shearlings will be rather limited for some weeks yet and the light offerings seem to find a ready outlet around steady prices. One packer reports moving about 4,000 this week at 75c for No. 1's and 42½c for No. 2's, and also about 4,000 No. 3's at 20c. Pickled skins are of poor quality and cocky at this season of the year and demand correspondingly limited; market quoted in a general way around \$3.50 per doz., with some offerings available this basis and others indicating that bids of \$3.50 would be acceptable although higher is asked in the absence of bids. Packer wool pelts usually quoted around \$1.85 per cwt. live basis, for Jan. pelts; sales by some outside packers are scheduled for next week on Feb. production, with around \$1.90 talked in a nominal way. However, dealer sales to tanners of three cars were reported early this week basis \$1.80 per cwt. live lamb.

New York

PACKER HIDES.—As previously reported, New York packers sold their Dec.-Jan. butt branded steers last week at 10½c, and good part of Jan. Colorado at 10c. Dec. and Jan. native steers are still held and quoted nominally 10½c pending trading.

CALFSKINS.—Holdings of both collectors and packers are reported moderate and trading awaited to define the position of the calfskin market, following the easiness in the western market. Some quoting collectors' calf in a nominal way around \$1.10 for 4-5's, \$1.30@1.35 for 5-7's, \$1.70@1.75 for 7-9's, and around \$2.60 for 9-12's, with packer calf at the usual differentials.

NEW YORK HIDE FUTURES

Saturday, Jan. 28, 1939.—New: Mar. 11.05@11.06; June 11.45@11.47; Sept. 11.79@11.82; Dec. 12.11 n; 119 lots; 4@5 lower. Old: Mar. 10.15; June 10.55 n; Sept. 10.70 n; 1 lot; 1@4 lower.

Monday, Jan. 30, 1939.—New: Mar. 11.30; June 11.65@11.68; Sept. 12.00 b; Dec. 12.32 n; 98 lots; 20@24 higher. Old: Mar. 10.38 n; June 10.83@10.84; Sept. 10.98 n; 5 lots; 23@28 higher.

Tuesday, Jan. 31, 1939.—New: Mar. 11.30@11.35; June 11.66@11.68; Sept. 12.00@12.05; Dec. 12.32 n; 340 lots; unchanged to 1 higher. Old: Mar. 10.35 n; June 10.77@10.83; Sept. 10.92 n; 4 lots; 3@6 lower.

Wednesday, Feb. 1, 1939.—New: Mar. 11.12 n; June 11.47; Sept. 11.79; Dec. 12.11 n; 103 lots; 18@21 off Old: Mar. 10.17 n; June 10.57@10.65; Sept. 10.72 n; no sales; 18@20 off.

Thursday, Feb. 2, 1939.—New: Mar. 11.20 n; June 11.56@11.58; Sept. 11.90; Dec. 12.22; 89 lots; 8@11 higher. Old: Mar. 10.25 n; June 10.68 n; Dec. 10.93 n; no sales; 8@21 higher.

Friday, February 3, 1939.—New contracts: Mar. 10.90@10.94; June 11.27; Sept. 11.60@11.63; Dec. (1939), 11.90 b; sales 260 lots. The closing lower. Old: Mar. 9.95 n; June 10.37 n; Sept. 10.62 n; 3 sales. Closing 30@31 lower.

CHICAGO HIDE FUTURES

Saturday, Jan. 28, 1939.—Close: Mar. 11.05 n; June 11.45 b; Sept. 11.70 b; no sales; unchanged to 20 higher.

Monday, Jan. 30, 1939.—Close: Mar. 11.05 n; June 11.50 b; Sept. 11.65 b; no sales; 5 higher to 5 lower.

Tuesday, Jan. 31, 1939.—Close: Mar. 11.35 ax; June 11.50 n; Sept. 11.80 b; 1 lot; unchanged to 30 higher.

Wednesday, Feb. 1, 1939.—Close: Mar. 11.35 n; June 11.50 n; Sept. 11.80 n; no sales; unchanged.

Thursday, Feb. 2, 1939.—Close: Mar. 11.08; June 11.48; Sept. 11.80 n; 4 lots; unchanged to 27 lower.

Friday, February 3, 1939.—Close: Mar. 10.95; June 11.35; Sept. 11.80 n; 4 sales. Closing unchanged to 15 lower.

LIVERPOOL PROVISION STOCKS

Provision stocks on hand February 1, 1938 at Liverpool:

	Feb. 1, 1939.	Jan. 1, 1939.	Feb. 1, 1938.
Bacon, lbs.	132,944	337,344	351,008
Ham, lbs.	348,544	28,448	311,472
Shoulders, lbs.	224		3,136
Butter, cwt.*	10,580	6,922	4,523
Cheese, cwt.*	23,988	25,033	18,792
Lard, steam (U. S.) tons.	72	118	37
Lard, steam (Argentina) tons.	14	7	3
Lard, steam (U. S.) tons.	46	49	88
Lard, refined (Canada) tons.	696	446	871
Lard, refined (U. S.) tons.	53	10	48
Lard, refined (Can. & So. Amer.) tons.	30	13	6

* (Ton of 2,240 lbs.; cwt., 112 lbs.)

ARGENTINE BEEF EXPORTS

Cable reports of Argentine exports of beef this week up to February 3, 1939: To the United Kingdom, 127,828 quarters; to the Continent, 971. Last week to United Kingdom, 101,410 quarters; and to the Continent, 6,250.

Week's Closing Markets

FRIDAY'S CLOSINGS

Provisions

Lard futures were weak the latter part of the week on liquidation and packer selling. The market was at new lows, influenced by weakness in cotton oil and limited support.

Cottonseed Oil

Cotton oil was active but weak with general liquidation catching stop loss orders; market was at new lows with weakness in lard and dullness in cash oil trade. Lower crude markets aided downturn. Southeast crude sold at 5½¢ lb.; Southeast and Valley, 5½¢ lb., bid. Texas 5½¢ lb., bid. Trade houses were best buyers today and this absorption prevented greater weakness. Foreign selling and liquidation from South presumably on margin calls were factors. It is rumored Southern mill men are in Washington seeking larger import duties on foreign oils.

Quotations on bleachable cottonseed oil at close of market on Friday were March 6.65@6.64 sales; May 6.79@6.78; June 6.87; Sept. 6.92@6.93. Sales 471 lots. Closing steady.

Tallow

Extra tallow quoted at 5½¢ lb., f.o.b.

Stearine

Stearine, 6½¢ lb.

Friday's Lard Markets

New York, February 3, 1939.—Prices are for export. Lard, prime western, \$7.20@7.30; middle western, \$7.20@7.30; city, 6½¢; refined continent, 7½¢; South America, 7½¢; Brazil kegs, 7½¢; shortening, 9c in carlots.

BRITISH PROVISION MARKETS

Liverpool, February 2, 1939.—General provision market steady but firm; fair demand for lard; poor demand for hams.

Friday's prices were: Hams, American cut, 91s; Canadian hams (A.C.) 98s; short backs, unquoted; bellies, English, 70s; Wiltshires, 80s; Cumberlands, 69s; Canadian Wiltshires, 83s; Can. Cumberlands, 91s; lard, 39s 6d.

LIVERPOOL PROVISION PRICES

Prices of first quality product at Liverpool for the week ended Jan. 21:

	Jan. 21, 1939.	Jan. 13, 1938.	Jan. 20, 1938.
per cwt. per cwt. per cwt.			
American green bellies.	\$14.86	\$15.23	\$17.51
Danish Wiltshire sides.	19.84	20.60	21.45
Canadian green sides.	16.40	17.42	17.81
American short cut green hams.	20.54	20.88	18.85
American refined lard.	8.70	8.95	11.49

CHICAGO HIDE QUOTATIONS

Quotations on hides at Chicago for the week ended Feb. 3, 1939:

	Week ended Feb. 3.	Prev. week.	Cor. week, 1938.
Hvy. nat.	@10½	@10½	@12½
Hvy. Tex.	@10½	@10½	@12½
Hvy. butt brnd'd	@10½	@10½	@12½
Hvy. Col.	@10	@10	@12
Ex-light Tex.	@10	@10	@12
Brnd'd cows.	@10	9½@10	8 @ 9
Hvy. nat.	@10	9½@10	8½@10
Brnd'd cows.	@10½	10 @10½	8½@10
Nat. bulls.	@7½	@7½	8 @ 8½
Brnd'd bulls.	@6½	@6½	7 @ 7½
Calveskins.	17½@18½	18 @19	15 @16
Kips, nat.	@15½	@15½	9 @11
Kips, ov-wt.	@14½	@15	@10
Kips, brnd'd.	@13½	@13½	@9
Slunks, reg.	@80	@80	@77½
Slunks, bris.	@40	@30	35 @40

Light native, butt branded and Colorado steers 1c per lb. less than heavies.

CITY AND OUTSIDE SMALL PACKERS.

Nat. all-wts.	9 @10n	9 @10n	8½@10
Branded.	8½@9½	8½@9½	@7½
Nat. bulls.	@7n	@7n	6 @6½
Brnd'd bulls.	@6n	@6n	5 @6
Calveskins.	15½@16½	15 @16½	12 @12½
Kips.	@13½	@13½	9 @9½
Slunks, reg.	@70	@70	60 @70
Slunks, bris.	@30n	@30n	30 @35n

COUNTRY HIDES.

Hvy. steers.	7 @7½	7 @7½	6½@6¾
Hvy. cows.	7 @7½	7 @7½	6½@6¾
Buffs.	8½@8½	8 @8½	@7n
Extremes.	@10	@10	@8n
Bulls.	5½@5½	5½@5½	5 @5½
Calveskins.	11½@12	11 @11½	@9
Kips.	@10½	@10½	@8
Horsehides.	2.50@3.20	2.40@3.10	2.00@3.10

SHEEPSKINS.

Pkr. shearings.	@75	@75	70 @75n
Dry pelts.	@15n	@15n	10½@11½

CHICAGO PROVISION STOCKS

Stocks of meat and lard on hand in Chicago are reported as of February 1:

	Jan. 31, 1939.	Dec. 31, 1938.	Jan. 31, 1938.
Pork, bbls.	15,418	12,025	20,131

P. S. lard, made since Jan. 1, '39, lbs. 21,456,727

P. S. lard, made Oct. 1, '38 to Jan. 1, '39, lbs. 15,212,359 15,620,676

P. S. lard, made Jan. 1, '38 to Oct. 1, '38, lbs. 28,728,265 34,067,949 36,484,252

P. S. lard, made previous to Jan. 1, '38, lbs. 1,833,000 1,904,420

Other kinds of lard, lbs. 4,854,604 4,710,345 5,380,793

D. S. Cl. bellies. 4,650,490 2,751,279 6,208,848

D. S. Cl. bellies. 19,100 19,100

D. S. rib bellies. 504,216 322,985 816,084

Ex. Sh. Cl. sides, lbs. 2,400

D. S. Sh. fat backs, lbs. 3,210,421 2,223,579 3,487,030

S. P. hams, lbs. 8,200,714 7,077,523 10,837,959

S. P. skinned hams, lbs. 23,244,213 20,117,576 26,699,276

S. P. bellies, lbs. 19,532,747 16,184,752 19,416,389

S. P. picnic and shoulders, lbs. 7,818,260 6,194,322 6,636,927

S. P. shldrs., lbs. 19,000

Other cuts of meats, lbs. 9,495,027 8,174,656 11,071,883

Total cut meats, lbs. 76,834,217 63,065,772 85,255,796

* Made since Oct. 1, 1938.

† Made previous to Oct. 1, 1938.

MEAT AND LARD EXPORTS

Exports of pork, bacon and lard through port of New York during week ended February 2, were 25 bbls. pork, 2,598,525 lbs. lard and 381,480 lbs. bacon.

Chicago Market Prices

WHOLESALE FRESH MEATS

Carcass Beef		Week ended Feb. 1, 1939.		Cor. week, 1938.	
Prime native steers—					
400-600	20	@20 1/2	15	@15 1/2	
600-800	20	@20 1/2	15	@15 1/2	
800-1000	20	@21	15	@15 1/2	
Good native steers—					
400-600	17 1/2	@18	12 1/2	@13 1/2	
600-800	17 1/2	@18	12 1/2	@13 1/2	
800-1000	17 1/2	@18	12 1/2	@13 1/2	
Medium steers—					
400-600	15	@15 1/2	11 1/2	@12	
600-800	15	@15 1/2	12	@12 1/2	
800-1000	15	@16	12 1/2	@13	
Heifers, good, 400-600	16	@17	11 1/2	@12 1/2	
Cows, 400-600	11 1/2	@13	10	@11	
Hind quarters, choice		@24		@21	
Fore quarters, choice		@16 1/2		@10 1/2	

Beef Cuts

Steer loins, prime	@40	@35
Steer loins, No. 1	@34	@28
Steer loins, No. 2	@30	@21
Steer short loins, prime	@53	@51
Steer short loins, No. 1	@41	@41
Steer short loins, No. 2	@36	@27
Fat steer loin ends (bliss)	@28	@18
Steer loin ends, No. 2	@26	@18
Cow loins	@19	@17
Cow short loins	@22	@21
Cow loin ends (bliss)	@14	@14
Steer ribs, prime	@30	@24
Steer ribs, No. 1	@26	@20
Steer ribs, No. 2	@23	@17
Cow ribs, No. 3	@17	@13
Steer rounds, prime	@18	@14
Steer rounds, No. 1	@17 1/2	@13 1/2
Steer rounds, No. 2	@16 1/2	@13
Steer chuck, No. 1	@15 1/2	@11
Steer chuck, No. 2	@14 1/2	@10 1/2
Cow rounds	@14 1/2	@12
Cow chuck	@12 1/2	@9 1/2
Steer plates	@11 1/2	@9
Medium plates	@9	@7 1/2
Briskets, No. 1	@15	@11 1/2
Steer navel ends	@9 1/2	@7 1/2
Cow navel ends	@8 1/2	@6 1/2
Fore shanks	@10 1/2	@8 1/2
Hind shanks	@7 1/2	@6
Strip loins, No. 1, bulls	@57	@55
Strip loins, No. 2	@50	@45
Striploin butts, No. 1	@29	@23
Striploin butts, No. 2	@22	@19
Beef tenderloins, No. 1	@65	@70
Beef tenderloins, No. 2	@50	@53
Rump butts	@14	@16
Flank steaks	@20	@16 1/2
Shoulder clods	@16 1/2	@15 1/2
Hanging tenderloins	@17	@15
Insides, green, 566 lbs.	@17 1/2	@17 1/2
Outsides, green, 566 lbs.	@16 1/2	@15 1/2
Knuckles, green, 566 lbs.	@17	@16 1/2

Beef Products

Brains (per lb.)	@7	@9
Hearts	@10	@11
Tongues	@19	@19
Sweetbreads	@17	@21
Ox-tail, per lb.	@12	@12
Fresh tripe, plain	@10	@9
Fresh tripe, H. C.	@11 1/2	@11 1/2
Livers	@20	@20
Kidneys, per lb.	@10	@9

Veal

Choice carcass	@18	@19
Good carcass	@17	@18
Good saddles	@22	@24
Good racks	@13	@15
Medium racks	@11	@13

Veal Products

Brains, each	@10	@11
Sweetbreads	@36	@38
Calf livers	@55	@58

Lamb

Choice lambs	@18	@18
Medium lambs	@17	@15
Choice saddles	@21	@18
Medium saddles	@19	@18
Choice fores	@16	@15
Medium fores	@13	@14
Lamb fries, per lb.	@31	@30
Lamb tongues, per lb.	@16	@15
Lamb kidneys, per lb.	@20	@20

Mutton

Heavy sheep	@8	@8
Light sheep	@10	@10
Heavy saddles	@12	@12
Heavy fores	@6	@7
Light fores	@8	@8
Mutton legs	@13	@14
Mutton loins	@12	@12
Mutton stew	@6	@7
Sheep tongues, per lb.	@12 1/2	@12 1/2
Sheep heads, each	@10	@10

Fresh Pork and Pork Products

Pork loins, 8@10 lbs. av.	@16 1/2	@16 1/2
Picnics	@12	@12 1/2
Skinless shoulders	@15	@15
Tenderloins	@30	@30
Spare ribs	@12	@11
Back fat	@8	@10
Boston butts	@16	@15
Boneless butts, cellar trim, 2@4	@19	@19
Hocks	@11	@10
Tails	@9	@11
Neck bones	@4	@4
Slip bones	@11	@11
Blade bones	@11	@11
Pigs' feet	@4	@5 1/2
Kidneys, per lb.	@10	@10
Livers	@9	@9
Brains	@9	@9
Ears	@4	@6
Snouts	@5	@6
Heads	@6 1/2	@7 1/2
Chitterlings	@6 1/2	@7

DRY SALT MEATS

Clear bellies, 14@16 lbs.	@10 1/2	@10 1/2
Clear bellies, 18@20 lbs.	@10 1/2	@10 1/2
Fat bellies, 25@30 lbs.	@9 1/2	@9 1/2
Fat backs, 16@12 lbs.	@6 1/2	@6 1/2
Fat backs, 14@16 lbs.	@7 1/2	@7 1/2
Regular plates	@7 1/2	@7 1/2
Jowl butts	@6 1/2	@6 1/2

WHOLESALE SMOKED MEATS

Fancy reg. hams, 14@16 lbs., parchment paper	21 1/2	@22 1/2
Fancy sld. hams, 14@16 lbs., parchment paper	22	@22 1/2
Standard reg. hams, 14@16 lbs., plain	20	@21
Picnics, 4@8 lbs., short shank, plain	15	@16 1/2
Picnics, 4@8 lbs., long shank, plain	14 1/2	@15
Fancy bacon, 6@8 lbs., parchment paper	22 1/2	@23
Standard bacon, 6@8 lbs., plain	19 1/2	@20 1/2
No. 1 beef sets, smoked	35	@36
Insides, 8@12 lbs.	32 1/2	@34
Outsides, 5@9 lbs.	32	@33
Knuckles, 5@9 lbs.	32	@33
Cooked hams, choice, skin on, fattened	33 1/2	@35
Cooked hams, choice, skinned, fattened	33 1/2	@35
Cooked picnics, skin on, fattened	27 1/2	@28 1/2
Cooked picnics, skinned, fattened	28 1/2	@29 1/2

BARRELED PORK AND BEEF

Clear fat back pork:		
70-80 pieces	\$13.00	
80-100 pieces	12.75	
100-125 pieces	12.50	
Beef pork	17.00	
Brisket pork	21.00	
Clear plate pork, 25-35 pieces	14.00	
Plate beef	23.00	
Extra plate beef	24.00	

VINEGAR PICKLED PRODUCTS

Pork feet, 200-lb. bbl.	\$16.00
Lamb tongue, short cut, 200-lb. bbl.	65.00
Regular tripe, 200-lb. bbl.	16.00
Honeycomb tripe, 200-lb. bbl.	22.50
Pocket honeycomb tripe, 200-lb. bbl.	26.00

SAUSAGE MATERIALS

(Packed basis.)

Regular pork trimmings	@7 1/2	@7 1/2
Special lean pork trimmings 85%	14 1/2	@15
Extra lean pork trimmings 95%	@16 1/2	@16 1/2
Pork cheek meat (trimmed)	@10	@10
Pork hearts	@9 1/2	@9 1/2
Pork livers	7	@7 1/2
Native boneless bull meat (heavy)	@14	@14
Shank meat	@13 1/2	@13 1/2
Boneless chucks	13	@13 1/2
Beef trimmings	@11	@11
Beef cheeks (trimmed)	@10	@10
Dressed canners, 350 lbs. and up	9 1/2	@10
Dressed cutter cows, 400 lbs. and up	@10 1/2	@10 1/2
Dr. bologna bulls, 600 lbs. and up	11	@11 1/2
Pork tongues, canner trim, 8 P.	@12 1/2	@12 1/2

DOMESTIC SAUSAGE

(Quotations cover fancy grades.)

Pork sausage, in 1-lb. carton	@22 1/2	@22 1/2
Country style sausage, fresh in link	@17 1/2	@17 1/2
Country style sausage, fresh in bulk	@15 1/2	@15 1/2
Country style sausage, smoked	@20 1/2	@20 1/2
Frankfurters, in sheep casings	@23 1/2	@23 1/2
Frankfurters, in hog casings	@21	@21
Bologna in beef middles, choice	@17 1/2	@17 1/2
Bologna in beef rounds, choice	@14 1/2	@14 1/2
Liver sausage in hog bungs	@17 1/2	@17 1/2
Smoked liver sausage in hog bungs	@22 1/2	@22 1/2
Head cheese	@16	@16
New England luncheon specialty	@23	@23
Mixed luncheon specialty, choice	@18 1/2	@18 1/2
Tongue sausage	@25	@25
Blind sausage	@18	@18
Souse	@17 1/2	@17 1/2
Polish sausage	@21 1/2	@21 1/2

DRY SAUSAGE

Cervelat, choice, in hog bungs	@40
Thuringer cervelat	@21
Farmer	@24 1/2
Holsteiner	@27 1/2
B. C. salami, choice	@35
Milano, salami, choice in hog bungs	@34
B. C. salami, new condition	@21 1/2
Prisces, choice, in hog middles	@35
Genoa style salami, choice	@42
Pepperoni	@31
Mortadella, new condition	@21 1/2
Capicola	@45
Italian style hams	@34
Virginia hams	@38

LARD

Prime steam, cash, Bd. Trade	@ 6.67 1/2
Prime steam, loose, Bd. Trade	@ 6.100
Refined lard, tierces, f.o.b. Chgo.	@ 8.12 1/2
Kettle rend., tierces, f.o.b. Chgo.	@ 9.12 1/2
Leaf, kettle rendered, tierces, f.o.b. Chicago	@ 9.82 1/2
Neutral, tierces, f.o.b. Chicago	@ 9.25
Shortening, tierces, c.a.f.	@ 9.25

OLEO OIL AND STEARINE

Extra oleo oil (in tierces)	@ 8
Prime No. 2 oleo oil	@ 7 1/2
Prime oleo stearine	@ 6 1/2

TALLOW AND GREASES

(Loose, basis Chicago.)

Edible tallow, 1% acid	5 1/2	@ 5 1/2
Prime packers tallow, 3-4% acid	6	@ 6
Special tallow	5 1/2	@ 5 1/2
No. 1 tallow, 10% f.f.a.	5 1/2	@ 5 1/2
Choice white grease, all hog	5 1/2	@ 5 1/2
A-White grease, 4% acid	5 1/2	@ 5 1/2
B-White grease, maximum 5% acid	5	@ 5 1/2
Yellow grease, 16-20 f.f.a.	4 1/2	@ 4 1/2
Brown grease, 25 f.f.a.	4 1/2	@ 4 1/2

ANIMAL OILS

Prime edible lard oil	Per lb.	10 1/2
Prime burning oil		9 1/2
Prime lard oil—inedible		9 1/2
Extra W. S. lard oil		9
Extra lard oil		8 1/2
Extra No. 1 lard oil		8 1/2
Spec. No. 1 lard oil		8 1/2
No. 1 lard oil		8 1/2
No. 2 lard oil		8
Acidless tallow oil		8 1/2
20° C. T. neatfoot oil		14 1/2
Pure neatfoot oil		11 1/2
Prime neatfoot oil		9
Extra neatfoot oil		8 1/2
No. 1 neatfoot oil		8 1/2

VEGETABLE OILS

Crude cottonseed oil, in tanks, f.o.b.		
Valley points, prompt	@ 5 1/2	@ 5 1/2
White deodorized, in bbls., f.o.b. Chgo.	8	@ 8 1/2
Yellow, deodorized	8	@ 8 1/2
Soap stock, 50% f.f.a., f.o.b. mills	1 1/2	@ 1 1/2
Soybean oil, f.o.b. mills	4 1/2	@ 4 1/2
Corn oil, in tanks, f.o.b. mills	4 1/2	@ 4 1/2
Coconut oil, sellers' tanks, f.o.b. coast	2 1/2	@ 2 1/2
Refined in bbls., f.o.b. Chicago	@ 8	@ 8

OLEOMARGARINE

F. O. B. Chicago.

White domestic vegetable margarine	@14 1/2
White animal fat margarine, in 1 lb. cartons	@14
Water churned pastry	@11
Milk churned pastry	@11 1/2
White nut margarine	@ 8 1/2

(Continued on page 37.)

PURE VINEGARS

A. P. CALLAHAN & COMPANY

2437 SOUTH LA SALLE STREET

CHICAGO, ILL.

Chicago Markets

(Continued from page 36.)

CURING MATERIALS

	Cwt.
Nitrite of soda (Chgo. whse stock):	
In 425-lb. bbls. delivered.....	\$ 8.75
Saltpeper, less than ton lots.....	
Dbl. refined granulated.....	6.90
Small crystals.....	7.90
Medium crystals.....	8.25
Large crystals.....	8.65
Dbl. rfd. gran. nitrate of soda.....	3.75
lbs. only, f.o.b. Chicago, per ton:	
Granulated.....	7.20
Medium, dried.....	10.20
Rock.....	6.80
Sugar—	
Raw, 96 basis, f.o.b. New Orleans.....	@2.75
Second sugar, 90 basis.....	None
Standard gran., f.o.b. refiners (2%).....	@4.30
Packers' curing sugar, 100 lb. bags,	
f.o.b. Reserve, L.A., less 2%.....	@3.90
Packers' curing sugar, 250 lb. bags,	
f.o.b. Reserve, L.A., less 2%.....	@3.80
Dextrose, in car lots, per cwt. (in paper	
bag).....	@3.39

SAUSAGE CASINGS

(F. O. B. Chicago.)

(Prices quoted to manufacturers of sausage.)

Beef casings:	
Domestic rounds, 180 pack.....	@16
Domestic rounds, 140 pack.....	@28
Export rounds, wide.....	@40
Export rounds, medium.....	@25
Export rounds, narrow.....	@35
No. 1 weasands.....	@10
No. 2 weasands.....	@14
No. 1 bungs.....	@10
No. 2 bungs.....	@14
Middles, regular.....	@38
Middles, select, extra wide, 2 1/2 in.,	
and over.....	@45
Dried bladders.....	
12-15 in. wide, flat.....	.75
10-12 in. wide, flat.....	.65
8-10 in. wide, flat.....	.35
6-8 in. wide, flat.....	.25
Hog casings:	
Narrow, per 100 yds.....	2.10
Narrow, special, per 100 yds.....	2.00
Medium, regular.....	1.50
English, medium.....	1.25
Wide, per 100 yds.....	1.00
Extra wide, per 100 yds.....	.75
Export bungs.....	.22
Large prime bungs.....	.17
Medium prime bungs.....	.09
Small prime bungs.....	.04
Middles, per set.....	.18
Stomachs.....	.09

SPICES

(Basis Chicago, original bbls., bags or bales.)

	Whole Ground.	Per lb. Per lb.
Allspice, Prime.....	16	17 1/2
Resifted.....	16 1/2	18 1/2
Chili Pepper.....		19 1/2
Chili Powder.....		19
Cloves, Annam.....	32	33
Madagascar.....	19	22
Zanzibar.....	20	23
Ginger, Jamaica.....	15	16 1/2
African.....	8 1/2	10 1/2
Mace, Fancy Banda.....	60	65
East India.....	53	58
E. I. & W. I. Blend.....		54
Mustard Flour, Fancy.....		22 1/2
No. 1.....		15
Nutmeg, Fancy Banda.....		25
East India.....		21
E. I. & W. I. Blend.....		16 1/2
Paprika, Extra Fancy.....		40
Paprika, Sweet Red Pepper.....		26 1/2
Piment (220-lb. bbls.).....		27 1/2
Pepper, Cayenne.....		26
Red Pepper, No. 1.....		19
Pepper, Black Alepp.....		10 1/2
Black Lampong.....		6 1/2
Black Tellicherry.....		10
White Java Muntok.....		9 1/2
White Singapore.....		9
White Packers.....		10 1/2

SEEDS AND HERBS

	Ground for	Whole Sausage.
Caraway Seed.....	9	11
Celery Seed, French.....	16	18
Cominon Seed.....	11 1/2	14
Coriander Morocco Bleached.....	8	
Coriander Morocco Natural No. 1.....	6 1/2	8 1/2
Mustard Seed, Dutch Yellow.....	9 1/2	12 1/2
America.....	7 1/2	10 1/2
Marjoram, French.....	17	20
Oregano.....	13 1/2	16
Sage, Dalmatian, Fancy.....	8 1/2	10 1/2
Dalmatian No. 1.....	7 1/2	9 1/2

New York Market Prices

LIVE CATTLE

Steers, good and choice, 955-lb.....	@12.00
Steers, good, 1140-1286-lb.....	9.25 @ 10.75
Cows, medium.....	5.75 @ 6.25
Cows, common.....	5.25 @ 5.50
Bulls, medium.....	6.00 @ 7.25

LIVE CALVES

Vealers, good and choice.....	\$10.00 @ 14.00
Vealers, medium.....	8.00 @ 9.50
Calves, good and choice.....	7.00 @ 8.00

LIVE HOGS

Hogs, good to choice, 198-lb.....	@ 8.15
Packing sows.....	@ 6.25

LIVE LAMBS

Lambs, good and choice, 85-90-lb.....	@ 10.00
Sheep.....	nom.

DRESSED BEEF

City Dressed.

Choice, native, heavy.....	21 @ 23
Choice, native, light.....	20 @ 22
Native, common to fair.....	17 @ 19 1/2

Western Dressed Beef.

Native steers, 600 @ 800 lbs.....	19 @ 21
Native choice yearlings, 440 @ 600 lbs.....	19 @ 20
Good to choice heifers.....	17 @ 18
Good to choice cows.....	15 @ 16
Common to fair cows.....	13 @ 14
Fresh bologna bulls.....	12 1/2 @ 13 1/2

BEEF CUTS

	Western.	City.
No. 1 ribs.....	25 @ 27	26 @ 28
No. 2 ribs.....	22 @ 24	23 @ 24
No. 3 ribs.....	19 @ 21	21 @ 22
No. 1 loins.....	40 @ 48	44 @ 50
No. 2 loins.....	30 @ 40	36 @ 42
No. 3 loins.....	24 @ 25	30 @ 34
No. 1 binds and ribs.....	22 1/2 @ 24	23 @ 25
No. 2 binds and ribs.....	20 @ 22	21 @ 22 1/2
No. 1 rounds.....	17 @ 18	17 @ 18
No. 2 rounds.....	16 @ 16	16 @ 17
No. 3 rounds.....	15 @ 15	15 @ 16
No. 1 chucks.....	17 @ 17	17 @ 18
No. 2 chucks.....	16 @ 16	16 @ 17
No. 3 chucks.....	15 @ 15	15 @ 16
City dressed bolognas.....	13 @ 14	13 @ 14
Rolls, reg. 6 @ 8 lbs. av.....	23 @ 25	23 @ 25
Rolls, reg. 4 @ 6 lbs. av.....	18 @ 20	18 @ 20
Tenderloins, 4 @ 6 lbs. av.....	50 @ 60	50 @ 60
Tenderloins, 5 @ 8 lbs. av.....	50 @ 60	50 @ 60
Shoulder clods.....	16 @ 18	16 @ 18

DRESSED VEAL

Good.....	10 @ 20
Medium.....	18 @ 19
Common.....	17 @ 18

DRESSED SHEEP AND LAMBS

Spring lambs, good.....	19 @ 20
Spring lambs, good to medium.....	18 @ 19
Spring lambs, medium.....	17 @ 18
Sheep, good.....	10 @ 11
Sheep, medium.....	8 @ 10

DRESSED HOGS

Hogs, good and choice (90-140 lbs.,	
head on; leaf fat in).....	\$12.50 @ 13.50

FRESH PORK CUTS

Pork loins, fresh, Western, 10 @ 12 lbs.....	@ 15 1/2
Shoulders, Western, 10 @ 12 lbs.....	@ 14
Butts, regular, Western.....	@ 15
Hams, Western, fresh, 10 @ 12 lbs.....	@ 21
Picnics, West., fresh, 6 @ 8 lbs. av.....	@ 14 1/2
Pork trimmings, extra lean.....	@ 19
Pork trimmings, regular 50% lean.....	@ 10 1/2
Spareribs.....	@ 13

COOKED HAMS

Cooked hams, choice, skin on, fattened.....	@ 38
Cooked hams, choice, skinless, fattened.....	@ 39

SMOKED MEATS

Regular hams, 8 @ 10 lbs. av.....	@ 25
Regular hams, 10 @ 12 lbs. av.....	@ 24
Regular hams, 12 @ 14 lbs. av.....	@ 23
Skinned hams, 10 @ 12 lbs. av.....	@ 24
Skinned hams, 12 @ 14 lbs. av.....	@ 23 1/2
Skinned hams, 14 @ 16 lbs. av.....	@ 22 1/2
Picnics, 4 @ 6 lbs. av.....	@ 17
Picnics, 6 @ 8 lbs. av.....	@ 16 1/2
City pickled bellies, 8 @ 12 lbs. av.....	@ 21
Bacon, boneless, Western.....	@ 24
Bacon, boneless, city.....	@ 23
Rollettes, 8 @ 10 lbs. av.....	@ 22
Beef tongue, light.....	@ 23
Beef tongue, heavy.....	@ 24

FANCY MEATS

Fresh steer tongues, untrimmed.....	16c a pound
Fresh steer tongues, l. c. trimmed.....	28c a pound
Sweetbreads, beef.....	30c a pound
Sweetbreads, veal.....	70c a pair
Beef kidneys.....	12c a pound
Mutton kidneys.....	4c each
Livers, beef.....	28c a pound
Ortalls.....	14c a pound
Beef hanging tenders.....	30c a pound
Lamb fries.....	12c a pair

BUTCHERS' FAT

Shop Fat.....	\$1.75 per cwt.
Breast Fat.....	2.50 per cwt.
Edible Suet.....	3.50 per cwt.
inedible Suet.....	5.00 per cwt.

GREEN CALFSKINS

	5-9	9 1/2-12 1/2	12 1/2-14	14-18	18 up
Prime No. 1 veals.....	15	2.10	2.25	2.30	2.45
Prime No. 2 veals.....	14	1.90	2.05	2.10	2.15
Buttermilk No. 1.....	12	1.80	1.95	2.00	2.05
Buttermilk No. 2.....	11	1.65	1.80	1.85	1.90
Branded gruby.....	7	1.80	1.90	1.95	1.10
Number 3.....	7	.80	1.00	1.05	1.10

BONES AND HOOF

	Per ton	delf'd basis
Round shins, heavy.....	50.00	\$62.50
light.....	55.00	
Flat shins, heavy.....	52.50	
light.....	47.50	
Hoofs, white.....	75.00	
black and white striped.....	40.00	

PRODUCE MARKETS

BUTTER.

	Chicago.	New York.
Creamery (92 score).....	@ 25 1/2	@ 26 1/4
Creamery (90-91 score).....	24 1/2 @ 25	24 1/2 @ 25
Creamery firsts (88-89).....	24 1/2 @ 24 1/2	24 1/2 @ 25

EGGS.

Extra firsts.....	16 1/4 @ 16 1/2	16 1/4 @ 17
Firsts, fresh.....	15 1/2 @ 16 1/2	18 1/4 @ 18 1/2
Standards.....		

LIVE POULTRY.

Fowls.....	9 @ 19	18 @ 22
Springers.....	5 @ 20 1/2	10 @ 20
Broilers.....	13 @ 18	21 @ 22
Capons.....	18 @ 23	22 @ 26
Old Roasters.....	12 @ 13	16 @ 14
Bucks.....	10 @ 15	10 @ 14
Geese.....	10 @ 14	10 @ 14
Turkeys.....	16 @ 21	25 @ 25

DRESSED POULTRY.

Chickens, 17-24, frozen.....	21 1/2 @ 22	22 @ 23 1/2
Chickens, 25-47, frozen.....	20 @ 20 1/2	@ 21
Chickens, 48 up, frozen.....	22 @ 24	22 1/2 @ 25 1/2
Fowls, 31-47, fresh.....	15 1/2 @ 19	17 1/2 @ 20
48-59, fresh.....	20 @ 21	21 @ 21 1/2
60 and up, fresh.....	21 @ 21	21 @ 22
Turkeys, Northwestern.....		
Young toms, boxes.....	@ 27	@ 29
Young hens, boxes.....	@ 27	@ 30

BUTTER AT FIVE MARKETS

Wholesale prices 92 score butter for week ended Friday, January 27.

	21.	23.	24.	25.	26.	27.
Chicago.....	25 1/2	25 1/2	25 1/2	25 1/2	25 1/2	25 1/2
New York.....	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2
Boston.....	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2
Phila.....	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2	26 1/2
San Fran.....	27	26 1/2	26 1/2	27	27	27

*Not available.

Wholesale prices carlots—fresh centralized—90 score at Chicago:

House.....	25	25	25	25	25
Track.....					

Not quoted.

Receipts of butter by cities (lb.—Gross Wt.):

	This week.	Last week.	Since Jan. 1—1930.	1930.	1931.
Chgo.....	3,356,242	3,031,171	16,443,068	13,530,790	
New York.....	3,380,813	3,623,339	17,570,179	18,128,848	
Boston.....	1,073,989	1,213,307	5,275,029	5,816,361	
Phila.....	1,056,033	1,114,511	4,841,371	5,257,096	
Total.....	9,067,077	8,982,328	44,438,647	42,733,065	

Cold storage movement (lbs.—Net Wt.):

	In	Out	On hand	Same day
Jan. 26.				
Chicago.....	22,016	108,323	53,885,089	10,714,181
New York.....	75,882	294,329	39,177,053	2,267,391
Boston.....		19,040	2,746,359	590,837
Phila.....	87,259	24,860	519,981	65,124
Total.....	185,157	416,748	96,329,382	13,637,533

Live Stock Markets

WEEKLY REVIEW

JANUARY MARKETS

CATTLE and lamb prices at Chicago were higher in January than in December and higher than in January a year ago but the hog top and average were lower than a year ago and slightly higher than in December. With one exception, the top and average prices of beef steers were the highest for January since 1930. The exception was January, 1937. Beef steers topped at Chicago at \$13.65, equal to the highest price since December, 1937. Average steer price for the month at \$10.45 compares with \$8.30 a year ago, \$10.75 two years ago, \$9.45 in 1936 and \$9.15 in 1935.

Hogs topped at \$8.25 and averaged \$7.35. This compared with a top and average of \$9.10 and \$7.95 respectively in January, 1938. Lamb top at \$9.50 was 25c higher than in January, 1938, and the average at \$8.90 was 60c higher than a year ago. Calves topped at \$12.50 with bulk of sales during the month at \$9.00 to \$10.50. Cannery and cutters ranged in price from \$4.00 to \$5.75 during the month with bulk moving within the price range of \$4.25 to \$5.65, and the average for the month at \$4.90. This compared with \$4.35 in December, \$4.50 in January a year ago, \$4.20 two years ago and \$4.35 in January, 1936.

Average weight of cattle at Chicago was 1,005 lbs., 35 lbs. heavier than in December, 25 lbs. heavier than in January, 1938 and 60 lbs. heavier than in the 1937 period. Hogs were heavy, averaging 248 lbs. This was 3 lbs. heavier than in December, 13 lbs. heavier than in November, 7 lbs. heavier than in January a year ago and 13 lbs. heavier than in the same month two years ago. Sheep and lambs also were heavier than in the preceding two months, averaging the same—92 lbs.—as in January a year ago and 2 lbs. heavier than in January, 1937.

FEWER CATTLE IMPORTED

Cattle imported into the United States during 1938 totaled 424,022 head. This compares with an import of 494,946 head in the calendar year 1937. Of the 1938 total, 137,763 head came from Canada and 285,554 from Mexico. In 1937 the import from Canada totaled 295,339 head and that from Mexico 198,768 head. Recently the Mexican government placed some limitations on exports of live cattle to the United States.

Imports of cattle into the United States during December and the twelve months of 1938 and 1937 were as follows:

	Dec. '38.	Dec. '37.	12 mos. 1938.	12 mos. 1937.
Canada:				
Over 700 lbs.	7,520	720	82,971	104,192
175-700	1,157	515	9,147	50,355
Under 175 lbs.	1,974	1,904	45,645	80,792
Mexico:				
Over 700 lbs.	4,219	...	40,740	24,792
175-700 lbs.	24,172	5,426	233,752	172,717
Under 175 lbs.	98	...	2,062	1,250
Other countries:				
Over 700 lbs.	...	...	50	73
175-700 lbs.	6	19	654	765
Under 175 lbs.	...	1	...	1
Total	39,146	8,285	424,021	494,946

DECEMBER LIVESTOCK COST

Packers paid \$141,000,000 for livestock slaughtered under federal inspection during December, 1938. This compared with \$137,000,000 in the same month of 1937 and with a \$121,000,000 average of the preceding five years. Of the amount paid in December, 1938, cattle cost \$51,000,000, calves \$6,000,000, hogs \$74,000,000 and sheep and lambs \$10,000,000. In December, 1937, cattle cost \$49,000,000, calves \$6,000,000, hogs \$71,000,000 and sheep and lambs \$10,000,000. The 5-year average cost of cattle was \$43,000,000, calves \$5,000,000, hogs \$63,000,000 and sheep and lambs \$10,000,000.

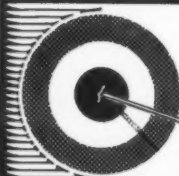
Average per cwt. cost to packers for cattle during December, 1938, was \$7.20 compared with \$6.29 in the same month of 1937 and a 5-year average of \$5.51; calves averaged \$7.74, \$7.12 and \$6.05 in the three periods; hogs averaged \$7.39, \$7.86 and \$7.07; and sheep and lambs \$8.31, \$8.18 and \$8.02 respectively for the three periods.

Meat and lard produced during December, 1938, totaled 1,227,000,000 lbs., of which 373,000,000 lbs. was beef; 43,000,000 lbs. veal; 757,000,000 lbs. pork and lard; and 55,000,000 lbs. lamb and mutton. In December, 1937, production totaled 1,195,000,000 lbs., of which 407,000,000 lbs. was beef, 50,000,000 lbs. veal; 681,000,000 pork and lard and 58,000,000 lbs. lamb and mutton. The five-year December average production was 1,182,000,000 lbs. of meat and lard of which 411,000,000 lbs. was beef; 50,000,000 lbs. veal; 664,000,000 lbs. pork and lard; 57,000,000 lbs. lamb and mutton.

MORRELL 1938 SLAUGHTER UP

An increase of 20 per cent over 1937 in the number of livestock slaughtered, as compared to 1938 slaughter figures, was reported by John Morrell & Co., Ottumwa, Ia., for its three plants, according to R. M. Owthwaite, manager of the company's Topeka plant. For the year ended December 31 the company slaughtered 2,802,534 head of livestock. The 1937 figure was 2,334,013 head.

December, 1938, slaughter advanced 14 per cent over that of the corresponding month of 1937, the company killing 352,341 head of livestock in the last month of 1938 as compared to 308,458 in the corresponding month of the preceding year. Hogs slaughtered in December, 1938, in the company's plants numbered 267,933, an increase of 16 per cent over hogs slaughtered during the month of December, 1937.



A BULL'S EYE

IN ALL LIVESTOCK CENTERS

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CORN BELT DIRECT TRADING

(Reported by U. S. Bureau of Agricultural Economics.)

Des Moines, Ia., February 2, 1939.—At 19 concentration points and 10 packing plants in Iowa and Minnesota hog market was stimulated by sharp reduction in receipts and trade undertone was fairly active most of the week. Current prices were 5¢@10¢ higher than last week's close, instances up more. Good to choice 180-220-lb., \$7.35@7.65; mostly \$7.50 up at packing plants, few delivered at \$7.70; 220-250-lb., \$7.20@7.45; 250-270-lb., \$7.00@7.30; 270-290-lb., \$6.90@7.15; 290-350-lb., \$6.65@7.00; few 160-180-lb., \$7.15@7.55. Good packing sows 350-lb. down, \$6.30@6.55, few to \$6.65; 350-425-lb., \$6.20@6.50; 425-550-lb., \$6.00@6.40.

Receipts for week ended February 2:

	This week.	Last week.
Friday, Jan. 27.....	25,500	45,500
Saturday, Jan. 28.....	25,400	29,900
Monday, Jan. 30.....	42,600	44,000
Tuesday, Jan. 31.....	26,300	34,600
Wednesday, Feb. 1.....	34,500	44,200
Thursday, Feb. 2.....	15,300	45,400

CANADIAN LIVESTOCK PRICES

STEERS.			
Top Prices	Week ended Jan. 26.	Last week.	Same week 1938.
Toronto.....	\$ 8.00	\$ 7.75	\$ 6.25
Montreal.....	7.50	7.25	6.60
Winnipeg.....	7.50	6.75	5.50
Calgary.....	7.25	7.25	4.50
Edmonton.....	6.50	6.25	4.50
Prince Albert.....	6.00	6.00	4.75
Moose Jaw.....	6.25	5.85	4.75
Saskatoon.....	6.25	5.50	4.50
Regina.....	5.50	6.00	....
Vancouver.....	6.50	6.25	....

VEAL CALVES.			
Toronto.....	\$11.25	\$11.00	\$11.00
Montreal.....	11.00	11.00	10.00
Winnipeg.....	9.00	9.00	8.50
Calgary.....	8.00	7.50	6.50
Edmonton.....	7.00	7.00	7.00
Prince Albert.....	6.00	6.00	6.50
Moose Jaw.....	7.00	6.50	6.50
Saskatoon.....	8.00	7.25	8.00
Regina.....	9.00	8.00	....
Vancouver.....	7.00	8.00	....

BACON HOGS.			
Toronto.....	\$ 9.65	\$ 8.85	\$ 8.75
Montreal ¹	9.75	9.00	9.25
Winnipeg ²	8.75	8.50	8.75
Calgary.....	8.50	7.90	8.15
Edmonton.....	8.35	8.25	8.25
Prince Albert.....	8.50	8.25	8.50
Moose Jaw.....	8.60	8.35	8.50
Saskatoon.....	8.50	8.25	8.50
Regina.....	8.60	8.35	....
Vancouver.....	8.00	8.00	....

¹ Montreal and Winnipeg hogs sold on a "F. & W." basis. All others "off trucks."

GOOD LAMBS.			
Toronto.....	\$ 8.75	\$ 9.00	\$ 8.25
Montreal.....	8.50	8.50	7.00
Winnipeg.....	8.00	8.00	7.25
Calgary.....	7.00	7.00	6.25
Edmonton.....	7.00	7.25	6.50
Prince Albert.....	6.75	6.75	6.25
Moose Jaw.....	7.25	7.00	6.25
Saskatoon.....	7.50	7.75	7.00
Regina.....	7.50	7.00	....
Vancouver.....	7.00	7.00	....

ST. LOUIS HOGS IN JANUARY

Receipts, weights and range of top prices for hogs at National Stock Yards, Ill., for January, 1939, with comparisons, reported by H. L. Sparks & Co.:

	Jan. 1939.	Jan. 1938.
Receipts, head.....	223,276	251,480
Average weight, lbs.....	233	229
Top prices:		
Highest.....	\$8.25	\$9.15
Lowest.....	7.65	8.25
Average cost.....	7.46	8.05

LIVESTOCK PRICES AT LEADING MARKETS

Livestock prices at five leading Western markets, Thursday, February 2, 1939, as reported by the U. S. Bureau of Agricultural Economics:

Hogs (soft & oily not quoted). CHICAGO. NAT. STK. YDS. OMAHA. KANS. CITY. ST. PAUL.

BARROWS AND GILTS:									
Good choice:									
140-160 lbs.....	\$ 7.60@ 8.10	\$ 7.25@ 7.75	\$ 7.50@ 7.70	\$ 7.45@ 7.65	\$ 7.90@ 7.95				
160-180 lbs.....	7.85@ 8.15	7.60@ 8.05	7.65@ 7.75	7.45@ 7.65	7.90@ 7.95				
180-200 lbs.....	7.90@ 8.15	7.90@ 8.10	7.65@ 7.75	7.45@ 7.65	7.70@ 7.90				
200-220 lbs.....	7.85@ 8.10	7.85@ 8.05	7.65@ 7.75	7.45@ 7.65	7.60@ 7.70				
220-250 lbs.....	7.65@ 8.00	7.55@ 7.85	7.50@ 7.65	7.30@ 7.40	7.40@ 7.60				
250-290 lbs.....	7.50@ 7.75	7.25@ 7.70	7.30@ 7.55	7.10@ 7.45	7.10@ 7.45				
290-350 lbs.....	7.35@ 7.60	7.10@ 7.40	6.90@ 7.25	6.85@ 7.20	7.00@ 7.15				
Medium:									
140-160 lbs.....	7.50@ 7.85	7.00@ 7.50			7.75@ 7.85				
160-180 lbs.....	7.60@ 7.90	7.15@ 7.85	7.25@ 7.50		7.75@ 7.85				
180-200 lbs.....	7.65@ 7.90	7.15@ 7.85	7.40@ 7.65		7.55@ 7.65				
PACKING SOWS:									
Good:									
275-350 lbs.....	6.90@ 7.15	6.70@ 6.90	6.50@ 6.70	6.50@ 6.65	6.60@ 6.65				
350-425 lbs.....	6.75@ 7.00	6.60@ 6.85	6.50@ 6.60	6.40@ 6.60	6.60@ 6.65				
425-550 lbs.....	6.50@ 6.85	6.40@ 6.75	6.40@ 6.60	6.35@ 6.50	6.60@ 6.65				
Medium:									
275-550 lbs.....	6.25@ 6.85	6.25@ 6.75	6.25@ 6.50	6.00@ 6.50	6.50 only				
PIGS (Slaughter):									
Good choice, 100-140 lbs.....	7.35@ 8.00	6.65@ 7.40			8.00@ 8.50				
Medium, 100-140 lbs.....	6.75@ 7.60	6.35@ 7.15							

Slaughter Cattle, Vealers and Calves:

STEERS, choice:									
750-900 lbs.....	11.25@12.50	10.50@11.50	10.75@12.00	10.50@12.00	10.50@11.75				
900-1100 lbs.....	11.50@13.25	11.00@12.50	11.25@13.00	10.75@12.25	11.00@12.00				
1100-1300 lbs.....	11.25@13.25	11.25@13.25	11.25@13.00	11.00@12.25	11.00@12.25				
1300-1500 lbs.....	11.25@13.25	11.50@12.75	11.00@12.25	11.00@12.25	11.00@12.25				

STEERS, good:									
750-900 lbs.....	9.25@11.25	9.00@10.75	9.00@11.25	9.00@10.75	9.25@10.75				
900-1100 lbs.....	9.25@11.50	9.25@11.25	9.25@11.25	9.00@11.00	9.50@11.00				
1100-1300 lbs.....	9.25@11.25	9.25@11.25	9.25@11.25	9.00@11.00	9.50@11.00				
1300-1500 lbs.....	9.25@11.25	9.50@11.50	9.25@11.25	9.00@11.00	9.50@11.00				

STEERS, medium:									
750-1100 lbs.....	7.75@ 9.25	8.00@ 9.25	7.75@ 9.25	7.75@ 9.00	7.75@ 9.50				
1100-1300 lbs.....	8.25@ 9.25	8.25@ 9.50	8.00@ 9.25	8.00@ 9.00	8.00@ 9.50				

STEERS, common (plain):									
750-1100 lbs.....	7.25@ 8.25	7.00@ 8.00	6.75@ 8.00	7.00@ 8.00	7.00@ 8.00				

HEIFERS:									
Choice, 550-750 lbs.....	10.50@12.00	9.75@11.00	9.50@11.00	9.50@10.50	9.75@11.25				
Good, 550-750 lbs.....	9.00@10.50	8.50@ 9.75	8.00@ 9.50	8.00@ 9.50	8.50@10.25				

COWS, all weights:									
Choice.....	7.25@ 8.25								
Good.....	6.75@ 7.25	6.50@ 7.25	6.50@ 7.00	6.50@ 7.25	6.50@ 7.25				
Medium.....	6.25@ 6.75	5.75@ 6.50	5.75@ 6.50	6.00@ 6.50	6.00@ 6.50				
Common (plain).....	5.65@ 6.25	5.25@ 5.75	5.50@ 5.75	5.50@ 6.00	5.50@ 6.00				
Low cutter and culter.....	4.25@ 5.65	4.00@ 5.25	4.25@ 5.50	4.00@ 5.50	4.00@ 5.50				

BULLS (Ylgs. excl.), all weights:									
Good.....	7.00@ 7.50	6.75@ 7.50	6.50@ 7.00	6.50@ 6.85	6.50@ 6.75				
Medium.....	6.75@ 7.15	6.00@ 6.75	6.00@ 6.50	6.00@ 6.50	5.75@ 6.50				
Cutter and common (plain).....	6.00@ 6.75	5.25@ 6.00	5.25@ 6.00	5.25@ 6.00	5.00@ 5.75				

VEALERS, all weights:									
Choice.....	11.00@12.75	@12.50	9.50@10.50	10.00@11.00	10.50@12.00				
Good.....	9.00@11.50	11.25@12.50	8.50@ 9.50	9.00@10.00	9.00@10.50				
Medium.....	8.00@ 9.00	10.00@11.25	7.50@ 8.50	7.50@ 9.00	7.50@ 9.00				
Cull and common (plain).....	6.00@ 8.00	5.50@10.00	5.50@ 7.50	5.50@ 7.50	5.50@ 7.50				

CALVES, 250-400 lbs.:									
Choice.....	7.50@ 8.00	8.00@ 9.00	7.50@ 9.00	8.50@ 9.25	9.00@10.00				
Good.....	6.50@ 7.50	7.00@ 8.00	6.50@ 7.50	7.50@ 8.50	8.00@ 9.00				
Medium.....	5.50@ 6.50	6.00@ 7.00	5.50@ 6.50	6.50@ 7.50	7.00@ 8.00				
Common (plain).....	5.00@ 5.50	5.00@ 6.00	5.00@ 5.50	5.50@ 6.50	5.50@ 7.00				

*Slaughter Lambs and Sheep:

LAMBS:									
Choice (closely sorted).....	9.35@ 9.50	9.50@ 9.75	8.90@ 9.10	9.10@ 9.30	9.10@ 9.30				
**Good and choice.....	8.90@ 9.20	8.85@ 9.25	8.75@ 8.90	8.85@ 9.10	9.00@ 9.15				
**Medium and good.....	7.35@ 8.65	7.50@ 8.60	7.50@ 8.65	7.50@ 8.50	7.75@ 8.75				
Common (plain).....	6.10@ 7.15	6.25@ 7.25	6.00@ 7.00	6.00@ 7.25	6.50@ 7.25				

YEARLING WETHERS:									
Good and choice.....	7.35@ 8.25		6.50@ 7.75	6.50@ 7.75	7.00@ 8.00				
Medium.....	5.50@ 7.35		5.50@ 6.50	5.50@ 6.50	6.00@ 7.00				

EWES:									
Good and choice.....	4.25@ 4.90	3.75@ 4.50	3.75@ 4.85	3.75@ 4.65	4.00@ 4.85				
Common (plain) & medium.....	2.50@ 4.25	2.00@ 3.75	2.00@ 3.75	2.00@ 3.75	2.00@ 4.00				

*Quotations based on animals of current seasonal market weights and wool growth.
**Quotations on good and choice and on medium and good grades, as combined, represent lots averaging within the top half of the good and top half of the medium grades, respectively.

NEW YORK LIVESTOCK

Receipts of salable livestock week ended January 28:

	Cattle.	Calves.	Hogs.	Sheep.
*Jersey City.....	2,177	1,587	289	2,005
Previous week.....	1,899	1,191	316	1,407
Two weeks ago.....	1,804	1,332	214	1,029

*Including hogs at 41st street.

PACIFIC COAST LIVESTOCK

Receipts of salable livestock for five days ended January 27:

	Cattle.	Calves.	Hogs.	Sheep.
Los Angeles	5,558	1,269	1,508	2,396
San Francisco	1,700	50	1,500	1,460
Portland	2,070	150	2,480	2,000

PACKERS' PURCHASES

Purchases of livestock by packers at principal centers for the week ending Saturday, January 28, 1939, as reported to The National Provisioner:

CHICAGO.

Armour and Company, 4,189 hogs; Swift & Co., 4,298 hogs; Wilson & Co., 4,250 hogs; Western Packing Co., Inc., 1,440 hogs; Agar Packing Co., 6,247 hogs; Shippers, 20,854 hogs; Others, 26,059 hogs.
Total: 32,168 cattle; 4,788 calves; 67,343 hogs; 51,811 sheep.

KANSAS CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	3,232	570	1,557	9,349
Cudahy Pkg. Co.	1,832	504	710	6,479
Swift & Company	1,839	502	982	5,323
Wilson & Co.	1,587	515	703	4,918
Indep. Pkg. Co.	1,027	296	175	1,750
Kornblum Pkg. Co.	3,844	296	2,339	3,743
Others	13,331	2,390	6,366	28,912

OMAHA.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	5,189	6,303	6,940	
Swift & Company	3,392	4,203	7,298	
Wilson & Co.	3,474	3,403	5,866	
Wilson & Co.	1,133	2,873		
Others	11,538			

Cattle and calves: Eagle Pkg. Co., 27; Greater Omaha Pkg. Co., 114; Geo. Hoffmann, 30; Lewis Pkg. Co., 813; Nebraska Beef Co., 601; Omaha Pkg. Co., 191; John Roth & Son, 107; South Omaha Pkg. Co., 111; American Pkg. Co., 49; Lincoln Pkg. Co., 290.
Total: 15,530 cattle and calves; 28,522 hogs; 19,604 sheep.

EAST ST. LOUIS.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	2,461	1,021	6,685	3,273
Swift & Company	2,357	636	5,589	2,843
Hunter Pkg. Co.	895	234	3,437	188
Hell Pkg. Co.	2,453			
Krey Pkg. Co.	984			
Laclede Pkg. Co.	2,500			
Sieloff Pkg. Co.	2,008			
Shippers	2,072	2,713	14,738	110
Others	5,116	297	4,058	844
Total	10,901	4,901	42,497	7,258

Not including 1,482 cattle, 3,286 calves, 29,721 hogs, and 2,063 sheep bought direct.

ST. JOSEPH.

	Cattle.	Calves.	Hogs.	Sheep.
Swift & Company	1,897	400	5,843	11,070
Armour and Company	2,159	366	4,994	6,578
Others	966	68	1,711	709
Total	5,022	834	12,548	18,357

SIOUX CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Cudahy Pkg. Co.	1,908	87	9,554	4,421
Armour and Company	1,895	78	9,854	3,697
Swift & Company	1,607	37	4,371	3,970
Shippers	2,568	27	7,658	944
Others	319	17	58	1
Total	8,234	246	31,526	13,033

OKLAHOMA CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	1,815	732	3,089	1,040
Wilson & Co.	1,579	688	2,766	1,047
Others	298	40	1,141	
Total	3,692	1,410	6,996	2,087

Not including 18 cattle and 379 hogs bought direct.

WICHITA.

	Cattle.	Calves.	Hogs.	Sheep.
Cudahy Pkg. Co.	1,629	740	1,409	3,854
Dold Pkg. Co.	746	106	954	
Dunn-Osterlag	73			
Fred W. Dold	106		305	1
Sunflower Pkg. Co.	46		166	
Others	44			
Total	2,644	846	2,984	3,855

Not including 2,051 hogs bought direct.

DENVER.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	933	127	1,508	5,344
Swift & Company	632	122	2,044	7,067
Cudahy Pkg. Co.	481	77	1,081	1,833
Others	1,207	282	1,252	3,825
Total	3,259	608	5,885	18,071

FORT WORTH.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	2,965	1,220	2,347	4,042
Swift & Company	2,116	1,161	2,162	4,438
Blue Bonnet Pkg. Co.	216	35	262	
City Pkg. Co.	182	77	384	2
Rosenthal Pkg. Co.	101	4	70	
Total	5,580	2,497	5,195	8,480

MILWAUKEE.

	Cattle.	Calves.	Hogs.	Sheep.
Plankinton Pkg. Co.	1,893	5,117	8,321	1,562
Armour & Co., Mil.	800	2,545		
Shippers	585	26	87	39
Others	937	741	81	422
Total	4,215	8,429	8,689	2,023

ST. PAUL.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Company	3,488	2,928	18,059	5,514
Cudahy Pkg. Co.	788	1,210		555
Rifkin Pkg. Co.	550	30		
Swift & Company	5,450	4,751		7,620
United Pkg. Co.	473	319		
Others	2,055			
Total	14,804	9,238	41,566	13,689

INDIANAPOLIS.

	Cattle.	Calves.	Hogs.	Sheep.
Kingan & Co.	1,546	559	10,473	1,544
Armour and Company	1,071	140	2,187	
Higgenier Bros.	9		1,000	
Stumpf Bros.			144	
Meyer P. Co.	177	24	392	
Stark & Wetzel	58	72	246	21
Wabnitz and Deters	37	5		
Manass Hartman Co.	2,426	1,636	14,104	9,159
Shippers	546	139	178	514
Others	6,042	2,600	29,070	11,238

CINCINNATI.

	Cattle.	Calves.	Hogs.	Sheep.
S. W. Gall's Sons	23		157	
E. Kahn's Sons	23	6,329	632	
Lohrey Packing Co.	3		230	
H. H. Meyer Pkg. Co.	12		2,862	
J. Schlachter's Sons	132	121		32
J. & F. Schroth P. Co.	297	220	2,150	
J. F. Stegner Co.	79		1,241	
Shippers	1,602	724	789	231
Others	2,801	1,321	13,601	1,053

Not including 645 cattle, 14 calves, 4,852 hogs and 956 sheep bought direct.

RECAPITULATION.

CATTLE.

	Week ended Jan. 28.	Prev. week.	Cor.
Chicago	32,168	33,312	39,963
Kansas City	13,331	12,401	15,500
Omaha	15,530	17,128	16,990
East St. Louis	10,901	10,628	11,142
St. Joseph	5,022	4,667	5,710
Sioax City	8,234	8,585	10,804
Oklahoma City	3,692	4,011	5,907
Wichita	2,644	2,663	2,571
Denver	3,259	3,866	4,625
St. Paul	14,804	15,317	12,080
Milwaukee	4,215	4,147	3,000
Indianapolis	6,042	6,024	5,527
Cincinnati	2,801	3,428	2,790
Ft. Worth	5,580	5,181	
Total	128,223	131,358	136,609

*Cattle and calves.

HOGS.

	Week ended Jan. 28.	Prev. week.	Cor.
Chicago	67,343	80,520	78,759
Kansas City	6,366	8,196	7,669
Omaha	28,522	37,506	33,122
East St. Louis	42,497	44,379	53,624
St. Joseph	12,548	14,113	15,446
Sioax City	31,526	35,550	35,828
Oklahoma City	6,996	6,668	5,813
Wichita	2,842	2,842	2,701
Denver	5,885	6,202	6,845
St. Paul	41,566	39,224	36,940
Milwaukee	8,689	9,522	9,435
Indianapolis	29,070	31,426	30,201
Cincinnati	13,601	15,901	11,839
Ft. Worth	5,185	6,222	
Total	302,788	341,571	326,241

SHEEP.

	Week ended Jan. 28.	Prev. week.	Cor.
Chicago	51,811	52,588	74,683
Kansas City	28,912	26,729	24,214
Omaha	19,604	18,288	32,240
East St. Louis	7,258	9,094	14,932
St. Joseph	18,357	19,971	20,933
Sioax City	13,033	16,962	14,843
Oklahoma City	2,087	3,012	1,529
Wichita	3,855	4,971	2,495
Denver	18,071	16,015	30,042
St. Paul	13,689	17,173	11,902
Milwaukee	2,023	2,476	1,331
Indianapolis	11,238	14,290	13,164
Cincinnati	1,053	1,189	1,047
Ft. Worth	8,480	8,045	
Total	199,471	211,674	243,355

CHICAGO LIVESTOCK

Statistics of livestock at the Chicago Union Stock Yards for current and comparative periods:

RECEIPTS.

	Cattle.	Calves.	Hogs.	Sheep.
Mon., Jan. 23	13,389	1,869	18,158	13,207
Tues., Jan. 24	7,365	1,418	19,479	12,342
Wed., Jan. 25	8,055	986	21,963	11,652
Thurs., Jan. 26	4,335	998	23,765	12,310
Fri., Jan. 27	1,129	332	10,841	7,477
Sat., Jan. 28	100		3,000	5,000

*Total this week... 34,347 5,603 97,206 61,988
Previous week... 35,142 5,628 124,381 61,540
Year ago... 40,540 4,765 118,596 66,819
Two years ago... 42,428 4,742 115,283 57,938

SHIPMENTS.

	Cattle.	Calves.	Hogs.	Sheep.
Mon., Jan. 23	2,893	138	6,129	5,615
Tues., Jan. 24	1,663	25	4,579	1,521
Wed., Jan. 25	2,088	112	2,899	2,358
Thurs., Jan. 26	1,129	1	3,824	3,954
Fri., Jan. 27	806	136	2,975	3,567
Sat., Jan. 28	100		200	500

Total this week... 9,279 412 30,606 17,515
Previous week... 10,922 505 27,656 13,514
Year ago... 10,975 496 29,673 17,013
Two years ago... 12,207 956 15,499 5,654

*Including 517 cattle, 818 calves, 30,290 hogs and 6,091 sheep direct to packers from other points.

†All receipts include directs.

JANUARY AND YEAR RECEIPTS.

Receipts thus far this month and year to date with comparison:

	1939.	1938.	Gain.	Loss.
Cattle	135,125	171,412		36,787
Calves	23,305	25,248		1,943
Hogs	452,942	554,791		101,849
Sheep	224,621	270,052		45,431

WEEKLY AVERAGE PRICE OF LIVESTOCK.

	Cattle.	Hogs.	Sheep.	Lambs.
Week ended Jan. 28	\$7.55	\$4.35	\$4.35	\$9.00
Previous week	10.50	7.35	4.30	9.05
1938	8.10	8.15	3.85	7.85
1937	10.75	10.60	5.50	10.45
1936	8.95	10.05	4.35	10.35
1935	10.00	7.70	4.00	8.45
1934	5.50	7.75	3.85</	

SLAUGHTER REPORTS

Special reports to THE NATIONAL PROVISIONER show the number of livestock slaughtered at 16 centers for the week ended January 28, 1939.

CATTLE

	Week ended Jan. 28, 1939.	Prev. week, 1938.	Cor. week, 1938.
Chicago	33,296†	23,616†	29,243
Kansas City	15,730	14,750	18,896
Omaha	14,909	16,459	17,132
East St. Louis	8,829	9,153	8,834
St. Joseph	5,521	4,355	6,160
Sioux City	5,945	6,222	9,079
Wichita	3,490	3,530	3,568
Fort Worth	5,580	5,181	...
Philadelphia	2,011	2,173	1,705
Indianapolis	2,016	1,705	1,605
New York & Jersey City	9,807	9,389	8,780
Oklahoma City	5,120	5,474	8,515
Cincinnati	3,497	3,492	2,790
Denver	4,334	4,712	...
St. Paul	12,749	12,712	10,520
Milwaukee	3,979	3,639	2,934
Total	136,220	126,184	134,473

*Cattle and calves.

HOGS

	Week ended Jan. 28, 1939.	Prev. week, 1938.	Cor. week, 1938.
Chicago	97,275	103,188	136,424
Kansas City	35,548	33,495	44,168
Omaha	43,317	44,762	55,809
East St. Louis	58,545	58,770	54,252
St. Joseph	15,831	13,905	16,972
Sioux City	31,170	31,330	45,915
Wichita	5,035	3,530	5,176
Fort Worth	5,195	6,222	...
Philadelphia	18,927	17,368	18,123
Indianapolis	15,113	13,601	13,663
New York & Jersey City	51,398	48,768	47,130
Oklahoma City	7,375	7,569	6,704
Cincinnati	14,240	16,636	11,839
Denver	6,138	6,200	7,643
St. Paul	56,037	47,849	52,807
Milwaukee	1,990	9,709	9,435
Total	463,134	462,902	526,069

SHEEP

	Week ended Jan. 28, 1939.	Prev. week, 1938.	Cor. week, 1938.
Chicago	37,882†	38,381†	58,709
Kansas City	28,912	26,720	24,214
Omaha	21,446	20,444	23,923
East St. Louis	7,148	8,772	14,248
St. Joseph	17,648	19,971	20,718
Sioux City	12,089	18,760	14,140
Wichita	3,855	4,971	2,495
Fort Worth	8,480	8,045	...
Philadelphia	4,195	3,764	4,619
Indianapolis	3,272	5,014	4,286
New York & Jersey City	62,623	71,374	66,538
Oklahoma City	2,087	3,012	1,529
Cincinnati	2,061	2,378	1,047
Denver	3,741	6,776	7,352
St. Paul	13,489	17,173	10,986
Milwaukee	1,990	2,384	1,331
Total	231,118	254,939	256,135

† Not including directs.

KINDS OF LIVESTOCK KILLED

The percentage of each class of livestock slaughtered during December, 1938 compared with the like month in 1937:

	Dec., 1938.	Dec., 1937.	10 yr. Dec. av.
Cattle—	Per cent.	Per cent.	Per cent.
Steers	43.25	38.62	44.49
Cows and heifers	53.50	38.25	32.19
Bulls and stags	3.25	3.13	3.32
Hogs—			
Barrows	42.87	44.81	47.72
Stags and boars	56.32	54.41	51.84
Stags and boars	.81	.78	.44
Sheep and lambs—			
Lambs and yearlings	93.92	92.76	93.75
Sheep	6.08	7.24	6.25

U. S. INSPECTED HOG KILL

At 8 points for the week ended January 27, 1939:

	Week ended Jan. 27, 1939.	Prev. week, 1938.	Cor. week, 1938.
Chicago	97,275	103,188	136,424
Kansas City	35,548	33,495	44,168
Omaha	43,317	44,762	55,809
St. Louis & East St. Louis	58,545	58,770	54,252
Sioux City	31,170	31,330	45,915
St. Joseph	15,831	13,905	16,972
St. Paul	56,037	47,849	52,807
N. Y., Newark and J. C.	51,398	48,768	46,646
Total	389,121	382,067	451,993

MEAT SUPPLIES AT EASTERN MARKETS

(Reported by the U. S. Bureau of Agricultural Economics.)

WESTERN DRESSED MEATS.

	NEW YORK.	PHILA.	BOSTON.
STEERS, carcass	Week ending January 28, 1939..... 9,186	2,428	2,628
	Week previous..... 9,996	2,450	2,525
	Same week year ago..... 8,992½	2,727	2,776
COWS, carcass	Week ending January 28, 1939..... 1,999	1,595	2,878
	Week previous..... 1,798½	1,502	3,045
	Same week year ago..... 1,800	1,533	2,483
BULLS, carcass	Week ending January 28, 1939..... 222	354	0
	Week previous..... 289	405	91
	Same week year ago..... 203	383	21
VEAL, carcass	Week ending January 28, 1939..... 8,132	1,585	775
	Week previous..... 8,558½	1,607	578
	Same week year ago..... 10,957	1,946	687
LAMB, carcass	Week ending January 28, 1939..... 40,764	17,540	13,866
	Week previous..... 36,105	13,445	12,977
	Same week year ago..... 43,157	15,009	16,916
MUTTON, carcass	Week ending January 28, 1939..... 2,003	521	722
	Week previous..... 1,609	417	533
	Same week year ago..... 4,394	590	1,199
PORK CUTS, lbs.	Week ending January 28, 1939..... 2,705,377	570,170	294,615
	Week previous..... 2,791,184	598,030	319,378
	Same week year ago..... 2,202,132	493,249	336,387
BEEF CUTS, lbs.	Week ending January 28, 1939..... 541,580	...	...
	Week previous..... 574,432	...	...
	Same week year ago..... 431,220	...	...
LOCAL SLAUGHTERS.			
CATTLE, head	Week ending January 28, 1939..... 9,807	2,011	...
	Week previous..... 9,389	2,173	...
	Same week year ago..... 8,780	1,705	...
CALVES, head	Week ending January 28, 1939..... 13,290	2,521	...
	Week previous..... 13,272	1,986	...
	Same week year ago..... 13,867	2,138	...
HOGS, head	Week ending January 28, 1939..... 48,903	18,927	...
	Week previous..... 49,935	17,368	...
	Same week year ago..... 47,139	18,123	...
SHEEP, head	Week ending January 28, 1939..... 62,623	4,195	...
	Week previous..... 71,374	3,764	...
	Same week year ago..... 66,538	4,619	...

RECEIPTS AT CHIEF CENTERS

Receipts for the week ended January 28, 1939:

	Cattle.	Hogs.	Sheep.
At 20 markets:			
Week ended Jan. 28.....	120,000	268,000	188,000
Previous week.....	122,000	324,000	187,000
1938.....	152,000	425,000	217,000
1937.....	140,000	312,600	205,000
1936.....	139,000	255,000	209,000
At 11 markets:			
Week ended Jan. 28.....	305,000	366,000	377,000
Previous week.....	301,000	377,000	361,000
1938.....	293,000	377,000	361,000
1937.....	312,000	312,000	312,000
1936.....	312,000	312,000	312,000
At 7 markets:			
Week ended Jan. 28.....	177,000	308,000	278,000
Previous week.....	185,000	445,000	256,000
1938.....	189,000	434,000	290,000
1937.....	199,000	420,000	328,000
1936.....	213,000	364,000	316,000

LIVESTOCK COST AND YIELD

Average cost, yield and weight of livestock slaughtered under federal inspection, December, 1938:

	Dec., 1938.	Nov., 1938.	Dec., 1937.
Average cost per 100 lbs.:			
Cattle.....	\$ 7.20	\$ 6.94	\$ 6.29
Steers.....	9.12	8.90	...
Calves.....	7.74	7.12	...
Swine.....	7.39	7.64	7.86
Sheep and lambs.....	8.31	7.90	8.18
Average yields, per cent:			
Cattle.....	53.09	52.67	52.07
Calves.....	55.07	54.80	56.64
Swine.....	75.69	74.37	75.27
Sheep and lambs.....	46.22	46.24	46.44
Average live weight, lbs.:			
Cattle.....	933.19	928.29	914.96
Steers.....	981.95	988.72	...
Calves.....	189.33	204.87	196.16
Swine.....	220.48	224.33	228.90
Sheep and lambs.....	88.00	85.03	88.50

†New series started June 1938. Steers also included in "cattle" data.

LIVESTOCK SUPPLY SOURCES

Percentage of livestock slaughtered during December, bought at stockyards and direct, is reported by the U. S. Bureau of Agricultural Economics:

	Dec., 1938.	Dec., 1937.	10 yr. Dec. av.
	Per cent.	Per cent.	Per cent.
Cattle—			
Stockyards.....	73.21	79.63	83.53
Other.....	26.79	20.37	16.47
Calves—			
Stockyards.....	62.86	66.89	74.94
Other.....	37.14	33.11	25.06
Hogs—			
Stockyards.....	39.77	44.02	52.69
Other.....	60.23	55.90	47.31
Sheep and lambs—			
Stockyards.....	61.79	67.76	76.21
Other.....	38.21	32.20	23.79

DENVER STOCK YARDS YEAR

Net earnings of Denver Union Stock Yards Co. for 1938 totaled \$171,969.36. The lower earnings were attributed to smaller receipts of livestock during the year and to rising taxes and other expenses. "Local, state and federal taxes continue a steadily increasing item of expense," president J. A. Shoemaker said in submitting his report to stockholders. "They affect adversely the earnings of the company as may be noted from the following tax figures: 1935, \$70,095.21; 1936, \$75,616.64; 1937, \$88,437.64; 1938, \$92,274.60."

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This year's World's Fair crowds afford a splendid opportunity for selling the more profitable specialty items, particularly tamales—when properly made and flavored just right.

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UP and DOWN the MEAT TRAIL

Meat Packing 40 Years Ago

(From The National Provisioner, Feb. 2, 1899.)

Livestock population in the United States on January 1, 1899, was estimated by the statistical bureau of the U. S. Department of Agriculture at 43,-948,370 cattle, 38,651,631 hogs and 39,-114,453 sheep. It was stated that the number of hogs in the country had not been so small since 1881 and cattle and sheep numbers were lower than in several years preceding.

Swift & Company registered its trade mark "Sunny South," claiming use since Oct. 15, 1891.

National Live Stock Association held its last meeting of the nineteenth century in Denver, Colo., Jan. 24-27, 1899. A cattle exhibit was held in conjunction with the meeting, including shorthorns, longhorns, muleys, white faces, Polled Angus, Durhams and just plain range cattle. Animals shown were of all ages, from young calves to a 17-year-old steer. John W. Springer was president of the association.

Fowler Brothers (Limited) held their annual meeting in London, with Sir Edward Lawrence, chairman, presiding. For the year ended October 31, 1898, net profit amounted to 29,415 pounds sterling. The company paid both semi-annual dividends, which was better than some American companies were able to do during that year. Anderson Fowler reported from New York that all departments had started the new year profitably.

First annual meeting of the tanners' section of the Board of Trade, Toronto, Canada, was held, with C. J. Miller elected as chairman.

Meat Packing 25 Years Ago

(From The National Provisioner, Feb. 8, 1914.)

Entire issue of \$10,000,000 of bonds by Swift & Company was taken by its stockholders and bondholders.

What was regarded as "long distance meat delivery" was recorded when the Atlantic Supply Co. of New York iced 7,000 lbs. of fresh meat and shipped it to Philadelphia by auto for the use of the new Adelphia hotel in celebrating its opening.

New Brunswick Packing Co., St. Johns, N. B., was organized with a capital stock of \$99,000. Both local and English capital was involved.

P. Brennan, T. W. Brennan and E. C. Andrews incorporated at Chicago the Independent Refrigerator Car Co., with a capital stock of \$100,000.

Frank Rhodes, manager for Morris &

Company at Utica, N. Y., and for more than 32 years associated with meat sales in New York state, died on January 30, 1914, at the age of 61 years.

Chicago News of Today

Wilbur H. Turner, well known representative of the Heekin Can Co., Cincinnati, O., was a recent visitor in Chicago.

William Karl, manager of the spice department, McCormick & Co., Baltimore, Md., visited in Chicago recently.

Operations of Drovers' Packing Co. were not interrupted by a fire last week-end which damaged a building housing killing, but did not damage product.

Harry H. Field of Faroll Brothers has been reappointed chairman of the Chicago Mercantile Exchange's hide committee for 1939. Others named to the committee were Walter Stern, H. Elkan & Co.; E. J. Price, United States Leather Co.; Geo. H. Elliott, Geo. H. Elliott & Co.; M. E. Fox, Peter Fox Sons Co.; H. I. Henner, Fahnestock & Co.; Thos. Gibbons, Cudahy Packing Co.; Thos. C. Behrendsen, Packers Hide Association; Joseph Godow, J. Godow & Co. and O. D. Mosser, American Oak Leather Company.

New York News Notes

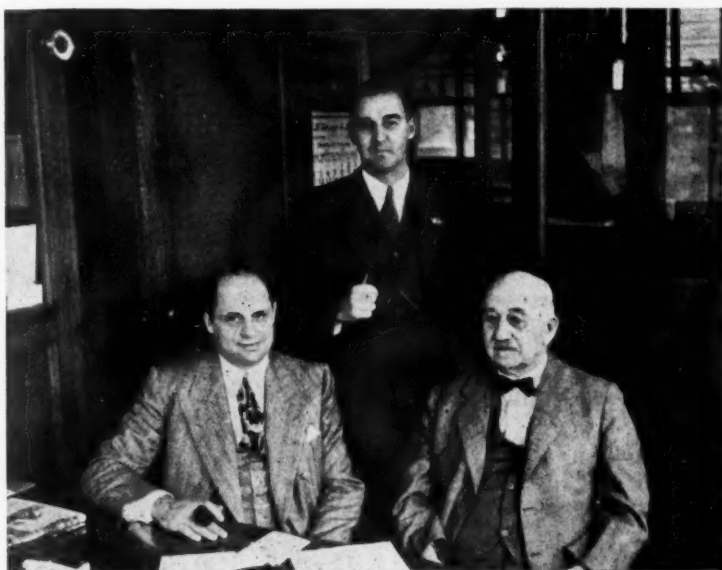
J. H. Scheffer, secretary and a director of Trunz Pork Stores, Inc., and general manager of the firm's plant at



J. H. SCHEFFER

25 Lombardy st., Brooklyn, N. Y., passed away on January 25 at the New York hospital after an illness of more than a year. Few men, in the climb to success, have made more lasting friends among their associates and workers than did "J. H.," whose energy and capacity for work seemed almost inexhaustible. When

he was six years old, his family emigrated from Bremen, Germany, and he received his education in the public schools of New York. In 1889 he obtained a position as assistant bookkeeper with Halstead & Co., Jersey City, then one of the largest packers in the East, where he remained until 1911, at which time the plant was purchased by Armour and Company. Mr. Scheffer spent a year or two with his brother in



CANADIAN PACKERS AND GUEST

J. M. Schneider, president and founder of J. M. Schneider Limited, Kitchener, Ont., Canada (right), takes time out for a photograph with his visitor, Laurence W. Pfaelzer, vice president, Independent Casing Co., Chicago (left), while general manager Fred H. Schneider (standing) looks on.

Wynantskill MFG. CO.

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the candy business, but the meat industry possessed greater attraction, so in 1913 he became affiliated with the Trunz family, with whom he remained for 26 years.

President Frank M. Firor, Adolf Gobel, Inc., Brooklyn, N. Y., is spending the winter in Florida.

Executive vice president Andrew E. Nelson has been appointed general manager of the Adolf Gobel plant at Morgan ave. and Rock st., Brooklyn, which duties are in addition to the general managership of the C. Lehmann Packing Co., a Gobel subsidiary.

At a meeting held on January 27 the New York Butchers' Calfskin Association passed a resolution asking for court permission to legally discontinue its calfskin and rendering activities.

Eastern Melters Association, Inc., comprising all melters located in the Metropolitan New York area, celebrated its eighth anniversary at the hotel New Yorker on January 26 with a banquet and entertainment. Louis Sattenspiel was chairman of arrangements. At an earlier meeting of the board officers for the ensuing year were elected: President, B. J. McWatters; vice president, Milton Rosenberg; secretary and treasurer, M. F. Pick; delegates to the national association, B. J. McWatters and A. N. Hayes.

Jesse V. Lake, president of Jesse V. Lake, Inc., New York sausage casing firm, died suddenly on January 25 at Rome, N. Y., while on an upstate New York business trip. Mr. Lake, who was 68 years old, had been in the casing business for more than 45 years, and enjoyed a wide acquaintance and friendship in the meat industry.

H. R. Bullock, chairman of the executive committee, Adolf Gobel, Inc., Brooklyn, N. Y., resigned as of January 28.

R. W. Ransom, executive and engineering department, John Morrell & Co., Ottumwa, Ia., visited New York last week on a tour which will include all of the company's Eastern branches.

Vice president R. E. Pearsall and H. F. Scheideman, refinery department, Armour and Company, Chicago, and R. E. Biggers, Lookout Oil & Refining Co., Chattanooga, Tenn., were visitors to New York for several days last week.

R. D. Hebb, industrial relations department, and H. E. Wilson, branch house sales department, Swift & Company, Chicago, visited in New York.

Herman M. Aron, in charge of kosher veal sales, J. J. Harrington and New York Veal & Mutton Co., passed away on January 29 at the Jewish hospital, Brooklyn, after a brief illness. Although only 50 years old at the time of his death, Mr. Aron had spent more than 35 years in the meat industry, having entered the business of his father, Aaron Aron, in his early boyhood. The senior Aron established a slaughtering plant in Brooklyn in 1874, and as his sons became of age they entered the business, which continued as a family enterprise until bought by Swift & Co.

Countrywide News Notes

Curtis B. Cross, president, Valley Packing Co., Salem, Ore., died on Wednesday, January 25, after an illness



C. B. CROSS

of two months. He was 51 years of age. Mr. Cross was a member of one of the pioneer families in the development of the West, and particularly in connection with the growth of the meat industry in the Northwest. His grandfather came from the East into Oregon by ox team, and established the first meat store and meat packing plant in Salem in 1852, many years before Oregon was admitted to the union. The business was carried on by the second generation, under Edwin C. Cross, and by the third generation, represented by Curtis Cross.

He is survived by his widow, two sons and a daughter. One son, Frank Cross, will carry on the family name in the packing company. During the period in which Mr. Cross was connected with the company he saw it grow from a local enterprise to one serving an extensive geographical area. He took an active part in city and state affairs, and in the activities of the meat packing industry nationally through his position as a member of the board of directors of the Institute of American Meat Packers. He was elected a director in 1934 and served in that capacity until the time of his death.

At the annual meeting of the board of directors of Canton Provision Co., Canton, Ohio, George L. Wade was elected president to succeed Frank



G. L. WADE

Wade, who passed away on December 30, and Ralph Wade was elected vice president. M. I. Rank, for 35 years secretary and treasurer of the company, was re-elected to that dual post. Mr. Rank is the last of the original founders of the company now living.

President A. T. Danahy, Danahy Packing Co., Buffalo, N. Y., is now enjoying a vacation in Florida.

Frank J. DeBenedette of San Francisco, Cal., is purchasing the plant of

the Idaho Meat Producers, Inc., Caldwell, Ida. The plant was built as a co-operative venture by a group of producers desiring a market for livestock in Southwestern Idaho. DeBenedette proposes to organize a local company and operate the plant for slaughtering livestock from the territory.

Frank J. Binz, president, Binz Hide & Tallow Co., St. Louis, Mo., died on January 28 after a prolonged illness. Mr. Binz assumed active management of the business about 1908 and directed its growth from a small concern to one of the most modern and well-equipped of its kind in the Middle West. The business will continue under the direction of Mr. Binz's two brothers, Henry N. Binz and John M. Binz, and Carl J. Barutio, all of whom have been connected with the company more than 20 years.

William Lexier, well known throughout the packing fraternity, has been made plant superintendent of the Home



WM. LEXIER

Packing & Ice Co., Terre Haute, Ind., packers of pork and beef. A wide experience in the packing field preceded Mr. Lexier's selection for the new position. Officers of the company are Fred E. McFall, president; Isaac Powers, vice president and manager; Robert S. Scott, vice president and sales manager; J. D. Royer, secretary and treasurer.

Lawrence M. Silberg, sales manager of the Louisville Provision Co., Louisville, Ky., has resigned to take a much needed rest and vacation. Mr. Silberg has been with the company for 15 years, working as bookkeeper, salesman, manager of sales office and sales manager. He served under the managements of Karl Zaeh, Thomas H. Ryan and F. E. Wernke, the present president.

Approximately 100 employees and visitors were guests of the management of Frederick County Products, Inc., at a buffet supper at the company's packing plant near Frederick, Md., on January 19. Visitors were shown through the plant by D. T. Dutrow, president and general manager, and members of his staff. Annual meeting of the company's stockholders was held earlier the same day, resulting in re-election of the 1938 directors. Officers subsequently elected included D. T. Dutrow, president and general manager; Charles Wertheimer, first vice president; H. C. Zacharias, second vice president; Leo Smith, treasurer; C. K. Heck, assistant treasurer; and Wm. T. Delaplaine, secretary.

Henry Lauer, for many years head hog buyer for G. H. Hammond Co. of Chicago and later buyer for Plankinton Packing Co., Milwaukee, Wis., died on January 28 in California at the age of 70 years.

Canned Meat Properties

(Continued from page 14.)

are not the most suitable for the preservation of vitamin B₁ during heating. Meat has a pH of approximately 6.2 and requires high temperature, long period processes for its complete sterilization when canned. As has been shown, losses of vitamin B₁ caused by canning are variable for different meats, and large in some cases. There is a great need for more specific information on effect of cooking and canning operations on this vitamin when present in non-acid products such as meat. Nevertheless, many meat products whether cooked or canned, still contain appreciable amounts of this vitamin.

Nicotinic Acid and Riboflavin

In the vitamin B₂ complex, nicotinic acid and riboflavin stand out as the most important members of the group. Work by Elvehjem and co-workers resulted in the isolation and identification of nicotinic acid as the anti-black tongue factor in dogs. Spies and others have also shown that this compound also prevents and cures human pellagra. Previous to this discovery, Goldberger, Sebrell, Wheeler, and others of the United States Public Health Service had carried out an extensive survey on the occurrence of the anti-pellagra factor in foods.

Among the foods which they listed as good sources of this factor are lean pork shoulder, rabbit meat, fresh beef, canned corned beef, canned chicken, and canned salmon. Lard and salt pork were classed as poor sources. The nicotinic acid contents of various meats and meat products are shown in Table 3. These figures confirm the findings of Aykroyd and Roscoe, who in 1929 reported that ox liver rated excellent and meat good, as sources of the anti-pellagra factor. Daily adult requirement of nicotinic acid is estimated to be approximately 10 to 25 micrograms.

Nicotinic acid is considered to be relatively stable toward moist heat. There is little danger of losses of this nutritional factor during processing of canned meats.

Riboflavin in Nutrition

Riboflavin is widely distributed in plant and animal life. Necessity of this factor for promotion of growth in experimental animals has been demonstrated. Since there is evidence to indicate that derivatives of riboflavin have an important function in the respiratory system of animal cells as hydrogen acceptors, it seems obvious that this compound also bears an important relationship to human nutrition. It has been shown that the Sherman-Bourquin method for estimating vitamin G is an estimation of riboflavin and that one Sherman-Bourquin unit of vitamin G is equal to 2.0 to 2.5 micrograms of synthetic riboflavin. The adult requirement has been suggested as 1-2 micrograms per day.

In regard to stability, riboflavin may

TABLE 3.—VITAMIN CONTENT OF MEAT AND MEAT PRODUCTS.

	Vitamin B ₁ International Units per Gram (Dry Basis)	Nicotinic Acid Milligrams per Gram (Dry Basis)	Riboflavin Sherman-Bourquin Units per Gram (Fresh Basis)
Beef brisket	.....	.....	0.74
Beef heart	10	.....	.....
Beef kidney	5	.....	.....
Beef liver	4	.....	10.0
Beef round	3	0.4	1.0
Beef spleen	2.5	.....	.....
Beef tongue	3	.....	.....
Lamb chops	.....	.....	1.1
Lamb liver	4	1.33	.....
Lamb leg	4.5	0.4	.....
Veal hindquarter	1.7	0.8	.....
Veal liver	11-20	0.6	1.2
Pork ham	.....	.....	0.81
Ham, cured	11	.....	.....
Smoked ham	13-20	.....	.....
Pork loin	8	0.7	.....
Pork heart	5.3	0.8	9.2
Pork liver	8	1.0	.....
Pork kidney	.....	.....	0.36
Bacon	.....	.....	.....

be considered less stable than other members of the vitamin B₂ complex. However, it is considered stable at temperatures commonly employed in cooking and canning. Heating in an alkaline media at these temperatures may cause appreciable losses. It is believed that the critical pH is about 8.0 to 8.5, which is above that normally found in canned meats.

Riboflavin Content of Meats

Table 3 also shows riboflavin contents of various meats and meat products. In comparison with other foods, meat may be classed as a good source of this component. Liver must be considered as one of the richest sources. Carlson and Sherman showed that in rat tissues, heat muscle was 5 times as high in riboflavin as skeleton muscle, kidney 10 times as high, and liver 10 to 20 times as high. Day concluded that beef heart contained 3 times as much vitamin G (riboflavin) as muscle, while liver and kidney contained 8 to 10 times as much. Gyorgy and Day found veal round steak to be slightly superior to beef in riboflavin content. Hoagland and Snider reported that beef, pork and lamb appeared to contain approximately the same quantities of vitamin G (riboflavin), and that beef spleen contained about as much as beef.

Studies by Christensen and associates showed that no losses of vitamin G (riboflavin) occurred during cooking or autoclaving of pork and beef. It is safe to conclude that no losses of riboflavin take place during sterilization of canned meats by heat.

Vitamins C, D and E

Ordinarily meat is not considered a source of vitamin C, the anti-scorbutic vitamin. There are, however, small amounts of vitamin C in muscle and appreciable amounts in kidney and liver. Due to the fact that fruits and vegetables are considered the most important anti-scorbutic foods, little attention has been given to effect of cooking and canning operations on comparatively small amounts of vitamin C found in meat products.

Vitamin D, the anti-rachitic vitamin, is lacking in muscle but is present in significant amounts in liver. It is very heat stable and is not destroyed by cooking or canning operations.

Relation of vitamin E—the anti-ster-

ility vitamin—to humans has not been definitely established. The average human diet is considered to contain ample amounts of this vitamin. Vitamin E is stable to heat, readily destroyed by oxidation, and reported to be unstable in the presence of certain fats. Animal tissues contain small amounts of this vitamin although, in the main, it is concentrated in the fat portions. No particular attention has been given to this vitamin in canned meats.

Value of Other Constituents

Besides the nutritional factors of meat which have been discussed, there are other constituents which may be shown by further scientific research to be very valuable. Chondroitin, abundant in cords, cartilage, and connective tissues, has been shown by Crandall and associates to have an important beneficial effect in the treatment of human stomach ulcers. Other members of the vitamin B₂ complex, such as the chick anti-dermatitis factor, the rat anti-dermatitis factor (vitamin B), and factor W (the growth factor in liver) must not be overlooked.

Nutritional value of meats varies with the animal and the portion of the carcass. In general, meats have been shown to be good sources of protein, fats, minerals, and energy, all of which are practically unchanged by temperatures employed in sterilizing canned product. Meats are considered good sources of vitamin B₁, nicotinic acid and riboflavin. Some meats and meat products contain appreciable quantities of vitamins A, C, D and small quantities of vitamin E. In general, it has been shown that temperatures used for sterilization of meats properly canned, cause partial destruction of vitamin B₁ and no appreciable, if any, losses of vitamin A, riboflavin, nicotinic acid, or vitamin D. Nutritional value of canned meats may be regarded to be similar to that of home cooked fresh meats. Both rank high in this regard.

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1938 CHAIN STORE TRENDS

Aggregate sales for the first half of 1938 within 3.3 per cent of comparable 1937 figures were reported by 158 chain store organizations supplying data to the Bureau of the Census, a preliminary compilation shows. These chains, operating a total of 33,223 stores and registering combined sales of \$1,919,320,000 in 1937, showed average losses of 3.1 per cent and 3.4 per cent for the first two quarters of 1938.

All geographical sections of the country shared in the 1938 sales decline, territorial losses ranging from .2 to 6.4 per cent. The decline of 4.7 per cent in pay rolls reported for the first half of 1938 as compared to the like 1937 period is said to indicate a change from the smaller store with clerk service to supermarkets using self-service and relatively fewer clerks.

Combined sales reported for 1937 by these chains showed an increase of 6.5 per cent over 1935's aggregate figure of \$1,801,433,000, though the number of stores in operation during 1937 was 864 below that reported in 1935.

CHAIN STORES IN DECEMBER

Highest average sales since April, 1931, were reported for the country's chain grocery stores during December, 1938, by the Department of Commerce. Sales advanced 4½ per cent over December, 1937, and showed a more than seasonal increase over November, 1938, sales despite the fact that November sales recorded a contra-seasonal gain of about 2 per cent.

Seasonally adjusted index for December, 1938, advanced to 98 from 96½ in November in comparison with the base figure of 100, derived from the 1929-1931 average. Total sales for the year 1938 were about 1½ per cent below the dollar volume for 1937, but indications were that the quantity of goods sold through chains was equal to or in excess of that sold during 1937, the Department of Commerce reported.

NEWS OF THE RETAILERS

Frank Wetterling is planning to open a retail meat market in Milwaukee, Wis., at 2240 N. 3rd st.

Mr. and Mrs. Fergus Oliver have taken over the grocery and meat market at Nekoosa, Wis., formerly operated by the Johnson and Hill Co. Hans Hagen has charge of the meat department in the new store.

Grocery department in the M. Krom & Sons department store, Antigo, Wis., is now under management of the company again after having been subleased. Meat department is under direction of Billy Nehls.

Emil Priebe, recording secretary of the Milwaukee Retail Meat Dealers' Association for 36 years, and Henry Buel, financial secretary for 35 years, were honored by the association on Feb-

WHOLESALE DRESSED MEAT PRICES

Wholesale prices of Western dressed meats quoted by the U. S. Bureau of Agricultural Economics at Chicago and Eastern markets on February 2, 1939.

Fresh Beef:	CHICAGO.	BOSTON.	NEW YORK.	PHILA.
STEERS, Choice ¹ :				
400-500 lbs.	\$16.50@18.50		\$17.50@19.00	
500-600 lbs.	16.50@18.50		17.50@19.00	18.00@19.00
600-700 lbs.	17.00@19.00	17.00@18.50	17.50@19.00	18.00@19.00
700-800 lbs.	17.00@19.00	17.00@19.00	17.50@19.00	
STEERS, Good ¹ :				
400-500 lbs.	14.50@16.50		16.00@17.50	
500-600 lbs.	14.50@16.50		16.00@17.50	16.00@18.00
600-700 lbs.	15.00@17.00	15.50@17.00	16.00@17.50	16.00@18.00
700-800 lbs.	15.00@17.00	15.50@17.00	16.00@17.50	
STEERS, Medium ¹ :				
400-600 lbs.	13.50@14.50		14.00@16.00	15.00@16.00
600-700 lbs.	14.00@15.00	14.00@15.50	14.00@16.00	15.00@16.00
STEERS, Common (Plain) ¹ :				
400-600 lbs.	13.00@13.50		13.50@14.00	
COWS (all weights):				
Choice				
Good	12.00@13.00	12.50@13.50	13.00@14.00	13.00@13.50
Medium	11.50@12.00	12.00@12.50	12.00@13.00	12.00@13.00
Common (plain)	11.00@11.50	11.50@12.00	11.50@12.00	11.50@12.00
Fresh Veal and Calf:				
VEAL (all weights) ² :				
Choice	17.00@18.50	19.00@21.00	19.00@21.00	19.00@21.00
Good	15.50@17.00	17.00@19.00	18.00@19.00	17.00@19.00
Medium	14.00@15.50	15.50@17.00	16.00@18.00	16.00@17.00
Common (plain)	12.50@14.00	14.50@15.50	14.50@16.00	14.00@15.00
CALF (all weights) ² :				
Choice				
Good	15.00@16.00		16.50@17.50	
Medium	14.00@15.00		15.00@16.50	
Common (plain)	13.00@14.00		14.00@15.00	
Fresh Lamb and Mutton:				
LAMB, Choice:				
38 lbs. down.	17.00@18.00	18.00@19.00	18.00@18.50	18.00@19.00
39-45 lbs.	16.00@17.00	17.00@18.00	17.00@18.00	17.00@18.00
46-55 lbs.	15.50@16.50	16.00@17.00	15.50@17.00	16.00@17.00
LAMB, Good:				
38 lbs. down.	16.00@17.00	17.00@18.00	17.00@18.00	17.00@18.00
39-45 lbs.	15.00@16.00	16.00@17.00	16.50@17.00	16.50@17.50
46-55 lbs.	14.50@15.50	15.50@16.50	15.00@16.50	16.00@17.00
LAMB, Medium:				
All weights	14.50@15.50	15.00@16.50	15.00@17.00	16.00@17.00
LAMB, Common (Plain):				
All weights	13.50@14.50	14.00@15.50	14.00@15.00	
MUTTON (Ewe), 70 lbs. down:				
Good	9.00@10.00	10.50@11.50	9.50@11.00	10.50@11.00
Medium	8.00@ 9.00	9.50@10.50	8.50@ 9.50	9.50@10.50
Common (plain)	7.00@ 8.00	8.00@ 9.50	7.50@ 8.50	9.00@ 9.50
Fresh Pork Cuts:				
LOINS:				
8-10 lbs.	16.00@17.00	16.00@16.50	15.00@16.00	14.00@15.50
10-12 lbs.	15.00@16.00	15.50@16.50	15.00@15.50	14.00@15.50
12-15 lbs.	14.00@15.00	15.00@16.00	14.00@14.50	14.00@14.50
16-22 lbs.	13.00@14.00			
SHOULDERS, Skinned, N. Y. Style:				
8-12 lbs.	12.50@13.50		13.50@14.50	13.50@14.50
PICNICS:				
6-8 lbs.		13.50@14.50		
BUTTS, Boston Style:				
4-8 lbs.	14.50@16.00		15.00@16.00	15.00@16.50
SPARE RIBS:				
Half Sheets	12.00@13.00			
TRIMMINGS:				
Regular	7.50@ 8.00			

¹Includes heifers 300-450 lbs. and steers down to 300 lbs. at Chicago. ²"Skin on" at New York and Chicago. ³Includes sides at Boston and Philadelphia.

ruary 1 with a testimonial dinner at the Pfister Hotel. Both men have just retired.

Ben Rosenthal has been named new manager of the Central Market, Fond du Lac, Wis. Mr. Rosenthal has been in the meat business for 25 years.

F. W. Hennekens has taken over operation of the meat department in William Trindal's Clover Farm store, Ladysmith, Wis.

Planning installation of a meat market, Eisenmenger Meat Co. is rebuilding the store at 977 Payne ave., St. Paul, Minn.

New meat market has been opened in the National Tea Co. unit at Cedar Falls, Ia.

Leo E. Rodewald has bought out the meat business of Emmet Cayler in Webster City, Ia.

Burkley's Market recently entered the meat business at 3150 S. E. Belmont in Portland, Ore.

A. Bercovich has opened a new meat market in San Francisco, Calif., at 1795 Church st.

Floyd S. Bull has reopened his meat market at 5914 San Pablo ave., Oakland, Calif.

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Wanted, canned meat man to head up department sales. Must have experience in full line of canned meats and come well recommended. W-471, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

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Wanted, general sales manager for large meat packing plant. Full knowledge of sales with good distribution. Capable of increasing sales and handling men. Must have A-1 reference. W-473, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

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Wanted, casing salesman familiar with Pacific Coast trade. W-462, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Foreman

Wanted for rendering plant, foreman who is thoroughly experienced cooking butcher shop collections, blending tallow and grease, and manufacturing meat meal. Must give references, salary expected. W-455, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Position Wanted

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Position wanted by bookkeeper-executive, age 38, versed in every phase of accountancy, particularly pertaining to meats; expert on taxes. Capable of assuming entire charge, office, credits and collections. Nominal remuneration. W-469, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

First-Class Sausage Foreman

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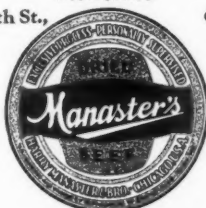
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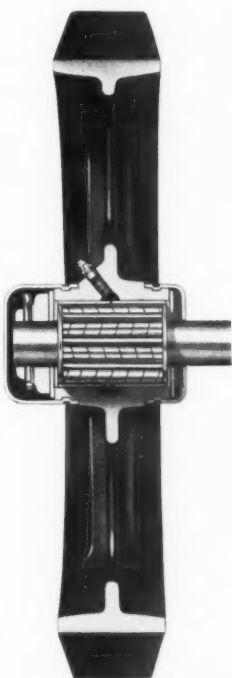
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